jc511 U.S. PTO 09/464989 12/16/99

Class	Subclass
379	88.17

ISSUE CLASSIFICATION

PATENT NUMBER 6349132

U.S. **UTILITY** Patent Application

O.I.P.E.	PATENT DATE
SCANNED A.A Q.A. CL	FEB 19 2002

CLASS	SUBCLASS	ART UNIT	EXAMINER
379	88.17	2676	

TITLE OF INVENTION:

APPLICANT(S):

ISSUING CLASSIFICATION

ORIGINAL CLASS	ORIGINAL SUBCLASS	CROSS REFERENCE(S) CLASS	CROSS REFERENCE(S) SUBCLASS (ONE SUBCLASS PER BLOCK)					
379	88.17	379	88.01	88.13	88.14	900		
INTERNATIONAL CLASSIFICATION								
A04M 1/64								

☐ Continued on Issue Slip Inside File Jacket

1/18/02 Formal Drawings (8 sheets) set 1 12/16/99

☐ TERMINAL DISCLAIMER	DRAWINGS			CLAIMS ALLOWED	
	Sheets Drwg.	Figs. Drwg.	Print Fig.	Total Claims	Print Claim for O.G.
	8	12	3/6	28	1
☐ The term of this patent subsequent to _____ (date) has been disclaimed.	Ovidio Escalante (Assistant Examiner) 9-25-01 (Date)			NOTICE OF ALLOWANCE MAILED	
☐ The term of this patent shall not extend beyond the expiration date of U.S Patent. No. _____	FAN TSANG SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 2600 (Primary Examiner) 9/27/01 (Date)			9-28-01	
				ISSUE FEE	
				Amount Due 1240.00	Date Paid 12-21-01
☐ The terminal ____months of this patent have been disclaimed.	MDJ (Legal Instruments Examiner) 10-2-01 (Date)			ISSUE BATCH NUMBER M74	

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United States
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Patent Bibliographic Data				09/21/2006 04:49 PM	
Patent Number:	6349132		**Application Number:**	09464989	
Issue Date:	02/19/2002		**Filing Date:**	12/16/1999	
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Status:	8th year fee window opens: 02/19/2009			**Entity:**	Large
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Surcharge Fee Code:					
Most recent events (up to 7):	2005/08/19	Payment of Maintenance Fee, 4th Year, Large Entity. --- End of Maintenance History ---			
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PATENT APPLICATION

09464989

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INITIALS

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1.	Application 9pgs papers.		42.		
2.	Trans Ltr w/attch	March 28 2000	43.		
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Printed 09/21/2001

APPLICATION NUMBER	FILING DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO
09/464,989	12/16/1999	379	2645	14999.3

APPLICANT
DARREN L WESEMANN, NORTH SALT LAKE, UTAH; DONG-KYUN NAM, MIDVALE, UTAH;
RICHARD T NEWTON, KAYSVILLE, UTAH.

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VERIFIED
NO OE

371 (NAT'L STAGE) DATA********
VERIFIED
NO OE

FOREIGN APPLICATIONS********
VERIFIED
NO OE

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Foreign priority claimed / 35 USC 119 (a-d) conditions met / Allowance / Verified and acknowledged	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
O yes O no / O yes O no O Met after / Ovidio Esculante OE (Examiner's Name Initials)	UT	8	~~60~~ 28	~~7~~ 4

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TITLE
VOICE INTERFACE FOR ELECTRONIC DOCUMENTS

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UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No. 14999.3

Total Pages in this Submission

TO THE ASSISTANT COMMISSIONER FOR PATENTS
Box Patent Application
Washington, D.C. 20231

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

VOICE INTERFACE FOR ELECTRONIC DOCUMENTS

jc511 U.S. PTO 09/464989 12/16/99

and invented by:

Darren L. Wesemann
Dong-Kyun Nam
Richard T. Newton

If a CONTINUATION APPLICATION, *check appropriate box and supply the requisite information:*

☐ **Continuation** ☐ **Divisional** ☐ **Continuation-in-part (CIP)** of prior application No.: _____

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Enclosed are:

Application Elements

1. ☒ Filing fee as calculated and transmitted as described below

2. ☒ Specification having 39 pages and including the following:

   a. ☒ Descriptive Title of the Invention
   b. ☒ Cross References to Related Applications *(if applicable)*
   c. ☐ Statement Regarding Federally-sponsored Research/Development *(if applicable)*
   d. ☐ Reference to Microfiche Appendix *(if applicable)*
   e. ☒ Background of the Invention
   f. ☒ Brief Summary of the Invention
   g. ☒ Brief Description of the Drawings *(if drawings filed)*
   h. ☒ Detailed Description
   i. ☒ Claim(s) as Classified Below
   j. ☒ Abstract of the Disclosure

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Application Elements (Continued)

3. ☒ Drawing(s) *(when necessary as prescribed by 35 USC 113)*
   a. ☒ Formal b. ☐ Informal Number of Sheets 8
4. ☒ Oath or Declaration
   a. ☒ Newly executed *(original or copy)* ☐ Unexecuted
   b. ☐ Copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional application only)*
   c. ☒ With Power of Attorney ☐ Without Power of Attorney
   d. ☐ *DELETION OF INVENTOR(S)*
   Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation By Reference *(usable if Box 4b is checked)*
   The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
6. ☐ Computer Program in Microfiche
7. ☐ Genetic Sequence Submission *(if applicable, all must be included)*
   a. ☐ Paper Copy
   b. ☐ Computer Readable Copy
   c. ☐ Statement Verifying Identical Paper and Computer Readable Copy

Accompanying Application Parts

8. ☒ Assignment Papers *(cover sheet & documents)*
9. ☐ 37 CFR 3.73(b) Statement *(when there is an assignee)*
10. ☐ English Translation Document *(if applicable)*
11. ☐ Information Disclosure Statement/PTO-1449 ☐ Copies of IDS Citations
12. ☐ Preliminary Amendment
13. ☒ Acknowledgment postcard
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Accompanying Application Parts (Continued)

15. ☐ Certified Copy of Priority Document(s) *(if foreign priority is claimed)*

16. ☒ Small Entity Statement(s) - Specify Number of Statements Submitted: **1**

17. ☐ Additional Enclosures *(please identify below):*

Fee Calculation and Transmittal

CLAIMS AS FILED

For	#Filed	#Allowed	#Extra		Rate	Fee
Total Claims	60	- 20 =	40	x	$9.00	$360.00
Indep. Claims	7	- 3 =	4	x	$39.00	$156.00
Multiple Dependent Claims (check if applicable) ☐						$0.00
					BASIC FEE	$380.00
OTHER FEE *(specify purpose)*		**Assignment Recordation Fee**				$40.00
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- ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

Dated: **December 16, 1999**

R. Burns Israelsen
Signature

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Attorney for Applicant
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cc:

CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10) Applicant(s): **Darren L. Wesemman, et al.**			Docket No. **14999.3**
Serial No. **Unassigned**	Filing Date **December 16, 1999**	Examiner **Unassigned**	Group Art Unit **Unassigned**

Invention: **VOICE INTERFACE FOR ELECTRONIC DOCUMENTS**

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12/16/99

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Transmitted: Patent Application (39 pgs); 8 Sheets of Formal Drawings; Declaration, Power of Attorney, & Petition (3 pgs); Assignment w/Cover Sheet (4 pgs); Declaration Claiming Small Entity Status for a Small Business Concern (2 pgs); Transmittal Letter in Duplicate (3 pgs.); Check No. 112848 for $936; postcard

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PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

01/04/2000 KHARLING 00000047 09464989
01 FC:201 380.00 DP
02 FC:202 156.00 DP
03 FC:203 360.00 DP

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(5/87)
*U.S. GPO: 1998-433-214/80404

Express Mailing Label N EL 446 775 357 US PATENT APPLICATION
Docket No. 14999.3

UNITED STATES PATENT APPLICATION

of

DARREN L. WESEMANN

DONG-KYUN NAM

and

RICHARD T. NEWTON

for

VOICE INTERFACE FOR ELECTRONIC DOCUMENTS

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BACKGROUND OF THE INVENTION

1. The Field of the Invention

The present invention relates to methods, systems, and computer program products for accessing electronic documents. More specifically, the present invention relates to methods, systems, and computer program products for providing a voice interface to electronic documents.

2. The Prior State of the Art

As computers have become ubiquitous in our day-to-day activities, the advantages of storing information electronically have steadily increased. One of the primary advantages of electronically stored information is its inherent versatility. For example, editing and exchanging electronic information is greatly simplified as compared to editing and exchanging documents stored in paper form only. Furthermore, any advantage attributable to having a physical document is retained in electronic storage because a "hard copy" of an electronic document may be readily produced from the electronic version.

Another significant advantage of electronically stored documents is that of providing enhanced access to information. Over the past few years, the improved access offered by electronic documents has become so important that many organizations expend substantial resources in scanning paper documents to store them electronically. Routine facsimile transmission further exemplifies the value of electronic access to documents. Arguably, it is access to information that fuels what many refer to as the Information Age.

Today, perhaps the most prominent example of access to electronically stored information is the Internet. Literally millions of people depend on the Internet for email, banking, investing, shopping, news, entertainment, and social interaction.. Not too many

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years ago, sharing information over the Internet was principally the domain of academicians and scientists. For members of the general public, the cryptic nature of access tools and the essentially prohibitive computer hardware requirements meant virtual anonymity for the Internet. However, the advent of hypertext navigation and the World Wide Web ("Web"), in conjunction with modestly priced and increasingly powerful personal computers, has propelled the Internet to the forefront of public attention and has made the Internet an almost indispensable source of information.

Likewise, use of early cellular telephone technology was also limited. Initially, problems included providing coverage beyond major metropolitan areas, the expense and size of cellular telephones, and the expense of airtime. As a result, cellular telephones were used mostly for vital business concerns rather than for personal matters. Over the past few years, however, the cellular industry has solved, to one degree or another, most of the problems that inhibited cellular's general acceptance. Today, cellular telephone use has dramatically increased and, for many people, is the primary means of communicating with others.

Increasing dependence on cellular telephones as a primary means of communication together with increasing dependence on the Internet as a source of information presents an unfortunate problem: a primary means of communication, the cellular telephone, does not interface well with a vital source of information, the Internet. The problem is compounded in that the hypertext navigation of the Web is visually oriented, making a computer with a relatively large screen an obvious choice for access, yet the size of cellular telephones is much more conducive to convenient portability. Frequently cellular telephones are clipped to belts or placed in pockets or purses; portable computers require their own case and a free

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hand to carry. Moreover, public telephones are available to those who do not carry cellular telephones, whereas public computers have a minimal presence at best.

Although the prior art includes some attempts to solve the problem of accessing electronic documents by voice, none of the prior art teachings offer the comprehensive solution provided by the present invention. Specifically, Figures 1 and 2 show the prior art's approaches to accessing Internet documents, approaches that have proven to be generally inadequate in many ways. The approach designated generally at 100 illustrates a Source 110 of electronic content that is accessible through Telephone 120. The content in Source 110 is written in a markup language specifically designed for telephone access.

Using Motorola's Voice eXtensible Markup Language ("VoxML"), the information includes explicit elements or tags for enabling voice interaction. However, requiring explicit voice elements presents a serious drawback: it provides no means for accessing content that does not include the VoxML's voice elements. Thus, VoxML provides no access to the wealth of content already available on the Web, written mostly in HyperText Markup Language ("HTML"). In other words, to provide full Web access, the entire content of the Web would need to be rewritten to include VoxML's explicit voice tags.

Moreover, VoxML's facilities for authoring voice content do not provide for using a common source to generate both audio and visual interfaces. Therefore, even if a single document contains both visual and audio elements, the elements must be maintained separately; any changes to one must be replicated in the other.

Figure 2 shows another approach to the problem, designated as 200, that has proven to be generally inadequate. HTML Source 210, representing existing Web content, can be accessed through one of two interfaces. First, as is well known in the art, Visual Browser 220 provides a visual interface for Monitor 230. Second, Static Translation 240 provides an

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audio interface for Telephone 250. Static Translation 240 is a copy of at least a portion of HTML Source 210 that has been manually altered to include audio elements. Someone examines HTML Source 210, creates a corresponding audio interface, and then stores the audio interface in Static Translation 240. A user who is interested in accessing HTML Source 210 through telephone 250 interacts with the audio interface provided by Static Translation 240.

The solution of Figure 2 has the advantage of providing an audio interface without obligating HTML content providers (e.g., providers of HTML Source 210) with the responsibility of maintaining an audio interface. However, this approach imposes new problems that may be nearly equal to the one it proposes to solve. Like the approach in Figure 1, a significant amount of work must be devoted to identifying HTML content of interest and then modifying that. Once the content has been initially modified, each time HTML Source 210 changes, corresponding changes must be made to the Static Translation 240. Naturally, some delay will occur between the time HTML Source 210 changes and the corresponding modifications are made to Static Translation 240. For content that changes frequently, such as information regarding financial markets, frequent and constant updating is a significant burden. Moreover, because of the incredible amount of HTML content available on the Web, only a small portion could be modified to include an audio interface and placed in Static Translation 240, leaving vast Web content completely inaccessible to Telephone 250.

One area that may be particularly well-served by telephone access is the personal home page market, as it is becoming increasingly popular for content providers, such as Yahoo!, to offer personal Web home pages. These personal pages allow a user to select from a variety of content that is placed on a single Web page. For example, a user may

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chose to have current data regarding various financial markets, weather, sports stories, headlines, technology, calendaring, contacts, entertainment, travel, reference, etc., appear on a personal home page. By providing a single, convenient source of diverse information, these personal home pages are highly attractive.

There is no end in sight for the increasing growth of the Internet nor is it likely that the Internet's expanding importance as a source of information will diminish any time soon. Considering the corresponding growth in cellular telephone use and the cellular telephone's convenient size, providing cellular access to the Internet in particular and electronic content in general would be a great benefit. Furthermore, public telephones also could provide beneficial Internet access for those who do not carry cellular telephones. However, the prior art lacks effective methods, systems, and computer program products for providing voice or audio interfaces to electronic content.

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SUMMARY OF THE INVENTION

The problems in the prior state of the art have been successfully overcome by the present invention, which is directed to methods, systems, and computer program products for providing a voice interface to electronic documents. The present invention allows for access to existing electronic content without requiring any modification to the content source. Furthermore, the present invention allows for a common content source to incorporate both a visual and audio interface, without including separate markups for each interface, making the content source more easily maintained. Although embodiments of the present invention are described as applied to Web pages in an Internet context, the invention is not limited to any particular format of electronic information or any particular network typically used for accessing electronic content.

In one preferred implementation, the present invention works with content that operates as an index to additional content, such as is typical with personal home pages. The present invention takes the content of a personal home page and creates a hierarchy of categories that are presented to a client. There is no requirement that the client is necessarily a person. For example, the client may be an intervening service needing an audio interface to electronic documents. The present invention generates an audio representation of the available categories and allows the client to select one. Navigating through the hierarchy, the client may eventually reach the bottom hierarchy level, with links pointing to content that includes text mixed with links. At this point, the present invention reports the number of links, and provides an audio representation of the text.

Because creating categories requires some knowledge of the layout for personal home pages, Web content in general will not be mapped into various categories. For unmapped content, the present invention operates as described above with respect to text

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mixed with links, by reporting the number of links on a page and providing an audio representation of the page's text. Alternatively, a client may choose to hear an audio representation that only includes links. In response, the client may select a link of interest to follow. The present invention also provides a variety of global commands that are available to assist navigation.

The foregoing methods, systems, and computer program products provide significant advantages over the prior art. Because the present invention provides an audio interface without requiring any modification to existing content, the telephone access will be readily available to the vast information available electronically. Moreover, the present invention also provides for organizing certain content by mapping links and text to a hierarchy of categories to aid navigation.

These and other objects, features, and advantages of the present invention will become more fully apparent from the following description and appended claims, or may be learned by practicing the invention as set forth below.

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BRIEF DESCRIPTION OF THE DRAWINGS

A more extensive description of the present invention, including the above-recited features, advantages, and objects, will be rendered with reference to the specific embodiments that are illustrated in the appended drawings. Because these drawings depict only exemplary embodiments, the drawings should not be construed as imposing any limitation on the present invention's scope. As such, the present invention will be described and explained with additional specificity and detail through use of the accompanying drawings in which:

Figure 1 is a block diagram showing a prior art solution for providing a voice interface to electronic content;

Figure 2 is a block diagram showing another prior art solution for providing a voice interface to electronic content;

Figure 3 is a block diagram illustrating the relationship of the present invention to other components used in accessing electronic content;

Figure 4 is a block diagram showing increased detail of the components that make up the present invention;

Figure 5 is a flow chart illustrating a preferred embodiment of the present invention that includes the use of mapped categories;

Figure 6 is an example of electronic content that is used to describe the operation of the embodiment illustrated in Figure 5;

Figure 7 shows the portfolios portion of the content from Figure 6 in greater detail;

Figure 8 shows the weather portion of the content from Figure 6 in greater detail;

Figure 9 shows the headlines portion of the content from Figure 6 in greater detail;

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Figure 10 illustrates the hierarchy generated by the present invention for the content shown in Figures 6-9;

Figure 11 is a flow chart illustrating a preferred embodiment of the present invention that does not include the use of mapped categories; and

Figure 12 is an example of electronic content that is used to describe the operation of the preferred embodiment illustrated in Figure 11.

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DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The invention is described below with reference to drawings. These drawings illustrate certain details of specific embodiments that implement the systems, methods, and computer program products of the present invention. However, describing the invention with drawings should not be construed as imposing, on the invention, any limitations that may be present in the drawings. For example, the embodiments that follow describe the present invention in the context of Web pages usually accessed over the Internet. Nevertheless, the scope of the present invention is not limited to electronic content formatted as Web pages nor is it limited to content that is ordinarily accessed through the Internet.

The present invention relates to methods, systems, and computer program products for providing an audio interface to electronic content. Two embodiments are described below. Each embodiment is a significant advance over the prior art because no modification of the content's source is required. The first embodiment is most useful for content that is arranged as a hierarchical index, with broad topic indices leading to more specific topic indices and eventually to individual documents discussing a particular subject. The present invention creates a hierarchy of categories and indices. A corresponding audio representation allows a client to navigate through the content, where the client need not be a person. For example, the present invention could be accessible to other services needing a voice interface to electronic content. Upon reaching the bottom level in the index hierarchy, selection of a link leads to specific documents.

Reaching specific documents introduces the operation of the second embodiment. Here, the present invention identifies the number of links and provides the user with an audio representation of the document text. A client may also choose to hear the links to navigate among various documents. Depending on the initial page identified by a client, the

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present invention may begin operating according to either of these two embodiments. Each embodiment includes the benefits of providing an audio interface to dynamic Web content without requiring providers to modify their documents.

The embodiments of the present invention may comprise a special purpose or general-purpose computer comprising various computer hardware. Other embodiments within the scope of the present invention also include computer-readable media having computer-executable instructions or data structures stored thereon. Such computer-readable media can be any available media that can be accessed by a general-purpose or special-purpose computer. By way of example, and not limitation, such computer-readable media can comprise RAM, ROM, EEPROM, CD-ROM or other optical disk storage, magnetic disk storage or other magnetic storage devices, or any other medium which can be used to store the desired executable instructions or data structures and which can be accessed by a general-purpose or special-purpose computer.

When information is transferred or provided over a network or other communications connection to a computer, the computer properly views the connection as a computer-readable medium. Thus, such a connection is also properly termed a computer-readable medium. Combinations of the above should also be included within the scope of computer-readable media. Computer-executable instructions comprise, for example, instructions and data which cause a general-purpose computer, special-purpose computer, or special-purpose processing device to perform a certain function or group of functions. The computer-executable instructions and associated data structures represent an example of program code means for executing the steps of the invention disclosed herein.

The invention will be described in the general context of computer-executable instructions, such as program modules, being executed by a computer. Generally, program

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modules include routines, programs, objects, components, data structures, or the like that perform particular tasks or implement particular abstract data types. Moreover, those skilled in the art will appreciate that the invention may be practiced with other computer system configurations, including hand-held devices, multi-processor systems, microprocessor-based or programmable consumer electronics, network PCs, minicomputers, mainframe computers, and the like. The invention may also be practiced in distributed computing environments where tasks are performed by remote processing devices that are linked through a communications network. In a distributed computing environment, program modules may be located in both local and remote memory storage devices.

Turning now to Figure 3, an environment, including the present invention, for accessing electronic content is referenced generally as 300. HTML Source 310 is an example of electronic content that is common to the Web. However, the invention imposes no particular requirement on the format of the content's source or on how the content typically is accessed. Visual Browser 320 accesses HTML Source 310 and provides a visual representation for Monitor 330. Visual browsers, such as Microsoft's Internet Explorer and Netscape's Navigator are both well known in the art. Voice Browser 340 provides an audio interface to HTML Source 310 that is suitable for use by Telephone 350. Alternatively, Voice Browser 340 could be used in conjunction with Visual Browser 320 to provide simultaneous visual and audio interfaces. Similarly, Visual Browser 320 could also be specialized to generate content that would be suitable for the limited space of a telephone display. Then, Visual Browser 320 and Voice Browser 340 could be used simultaneously through Telephone 350.

Figure 4 shows some of the basic components that make up Voice Browser 340. In addition to the following relatively brief treatment, the operation of these basic components

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will be described in greater detail with respect to the flow chart of Figures 5. Line/Call Manager 410 is responsible for establishing and maintaining telephone connections. Text to Speech 420 converts the text it receives to speech that can be communicated to a client and is an example of processor means for generating an audio representation of electronic content. Text to Speech 420 may also include some prerecorded speech. For example, prerecorded speech could be used for frequently used words, links, text or prompts. Modules for implementing both Line/Call Manager 410 and Text to Speech 420 are well known in their respective arts. Document Parsing and Audio Layout 430 receives electronic content and identifies any text and links included within the electronic content and is an example of processor means for parsing electronic documents. (Links are content elements that lead to other locations in the same document or to other documents entirely. HTML links, for example, create locations within a document's visual representation that may be selected to further explore the link's subject, such a defining a word or leading to related material.) The audio layout portion may organize certain content into a hierarchy as an aid to navigation and is an example of processor means for mapping any text and links identified into one or more categories.

Speech Recognition 440 interprets the audio or voice data received from a client so that Command Processing 450 can execute the client's request. Speech Recognition 440 is an example of processor means for receiving a spoken instruction from a client. Modules for implementing Speech Recognition 440 are well known in the respective art. Command Processing 450 may also perform various general control functions and coordinate the operation of other components. Document Retrieval Protocols 460 request and receive the electronic content of interest and are examples of processor means for obtaining electronic documents and for following links. These Document Retrieval Protocols 460 are also well

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known in the art of accessing electronic content, especially in the context of HTML documents.

As described in Figures 3 and 4, Voice Browser 340 provides an audio interface without imposing the limitations found in prior art solutions. Specifically, Voice Browser 340 does not require content providers to modify their documents to support a voice interface. Therefore, the dynamic content of the Web is available to Voice Brower 340 at the same instant it is available to Visual Brower 320. How Voice Browser 340 operates to create an audio interface is described more fully with reference to Figure 5.

All acts shown in the flow chart of Figure 5 will be described by using the document shown generally in Figure 6, and more specifically in Figures 7-9. Because each figure number is incorporated into individual references, i.e., reference 650 appears in Figure 6 and reference 940 appears in Figure 9, the specific figure number may be inferred and therefore may not be explicitly identified in the discussion that follows. It should also be noted that while the steps of Figure 5 are shown sequentially, there is no requirement that one step be completed prior to the next step beginning. For example, the prompts can be interrupted or anticipated by making a selection before the prompt finishes or before it even begins. Figure 6 is an example of content that provides hierarchical indices leading to more textually oriented material and is suitable for enhanced mapping.

In step 510, a particular document is identified or selected. For example, Text to Speech 420 may prompt the client to select or request a desired source of information. Options include unified messaging, home page, favorites, etc. Prompts for unified messaging, home page, favorites, etc., are examples prompts that may be prerecorded and included in Text to Speech 420. In response, the client selects the personal home page shown in Figure 6. The present invention can also include a variety of global spoken

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navigation commands, such as fast forward, rewind, cancel, forward, back, home, links, fax, telephone, and email. Fax, telephone, and email are instructions to fax, telephone (voice mail), or email the current document's contents, or some portion thereof, in audio and/or visual form based on what is appropriate for the particular instruction given, to someone selected from the client's contact list; the other terms retain their ordinary meaning. For example, an instruction to fax would send a visual representation of at least a portion of the document's contents to the fax recipient. Links is a request to hear a page's links only rather than its text.

Next, in step 520, Document Retrieval Protocols 460 retrieve or obtain the document. No particular protocols are imposed according to the present invention. For example, the document may be stored locally, stored on a local area network, stored on a private wide area network, or stored on the Internet. The document shown in Figure 6 is retrieved from the Internet. Having obtained the requested document, in step 530 Document Parsing & Audio Layout 430 next parses the content to identify any title, any text, any links, and any link names included within the document. A link name is simply the text that forms the link. For example, "Weather" is the link name of Weather category 810.

Parsing the retrieved document to identify title, text, links, and link names that may be present illustrates how an audio interface may be provided without requiring changes to the document source. In conjunction with the other aspects of the present invention, this allows immediate audio access to dynamic visual content that otherwise would be unavailable in the prior art. Once parsed, in step 540 the text and links included within the document are mapped to various categories.

Figure 6 identifies the categories present in the selected document and also shows some portions of the document that are filtered out and ignored. Top Banner 610 and

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Bottom Banner 660 include a variety of images and other content that is not particularly suitable for voice interaction. However, the enhanced mapping identifies three categories of information stored on the page, Portfolios 630, Weather 640, and Headlines 650. Each of the categories may also include content that is ignored. For example, Graphic 840 (see Figure 8) is eliminated because there is no speech analog, although alternate information provided within the image tag, such as the text of the "alt" attribute, could be used. Search Fields and Instructions 770 and 850 (see Figures 7 & 8) are eliminated because it is impractical to enter this type of data by speaking into a telephone.

There are a variety of ways to identify the page content that should be mapped. For example, it may be possible to use HTML tags, including attributes, as an indication of various categories. The enhanced mapping feature of the present invention for My Yahoo! pages looks for a tag with a particular background color attribute. Other mappings may use other HTML tags and/or tag attributes to identify categories. While enhanced mapping beyond the default mapping provided by parsing text and links requires some degree of customization, a single mapping can be used for all corresponding pages provided by a site. Thus, a single My Yahoo! enhanced mapping provides enhanced mapping for all My Yahoo! pages.

Figure 10 shows the hierarchy created by enhanced mapping of the document shown in Figure 6. The Categories 1010 include Portfolios 710, Weather 810, and my Front Page Headlines 910. The First-level of Links 1020 includes Quotes 720 within the Portfolios 710 category, Salt Lake City, UT 820 within the Weather 810 category, and Top Stories from Reuters 920, Tech News from News.com 930, and Top Sport Stories from AP 940 within the my Front Page Headlines 910 category. The Second-level of Links 1030 includes DJIA 730 and NASDAQ 750 within the Quotes 720 first-level of Portfolios 710 and the individual

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story headlines 922-926, 932-936, 942-946 within the first-level links Top Stories from Reuters 920, Tech News from News.com 930, and Top Sport Stories from AP 940 all within the My Front Page Headlines 910 category. The Text of Stories 1040 are documents that are produced by selecting any of the Second-level Links 1030.

In step 550, Text to Speech 420 generates the audio representation that corresponds to the document. It is not necessary that all of the audio representation be generated at one time. For example, a portion of the audio may be generated and communicated to the client while another portion is being generated. The audio may also be generated on demand as each level in the mapped hierarchy is accessed.

Next, in steps 560-590, Text to Speech 420 prompts the client to make various selections from categories 1010, First-level Links 1020, and Second-level Links 1030 to reach Text of Stories 1040. Again, some of these prompts may be prerecorded. Because each of the categories shown in Figures 7-9 includes options that may not be relevant to or available in other categories, steps 560-590 will be discussed separately for Figure 7, Figure 8, and Figure 9. Thus, steps 560-590 represent all possible choices. For certain documents, some of the steps may not be required. The foregoing description presumes that the selections made in steps 560-580 do not result in a document that is mapped.

Assuming that a client chooses Portfolios 710 in response to the category selection prompt in step 560, the following will occur. Because Portfolios 710 includes only a single first-level link, Quotes 710, prompting in step 570 is skipped, but the text of Quotes 710 played, and the client will be prompted to select a second-level link, either DJIA 730 or NASDAQ 750 (i.e., "Quotes, please choose from DJIA or NASDAQ"). In step 590, choosing DJIA 730 will play audio of Text 740 and choosing NASDAQ 750 will play audio of Text 760. However, DJIA 730 and NASDAQ 750 are also links. Although choosing the

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Links global command would not alter the choices offered, it would alter the action taken by making a selection. In this case choosing DJIA 730 or NASDAQ 750 would follow the respective links rather than playing the audio representation of Text 740 or Text 760.

Selecting Weather 810 at step 560 similarly leads to skipped steps. However, in this case, both steps 570 and steps 580 are skipped because Salt Lake City, UT 820 is the only first-level link and there are no second-level links. Therefore, selecting Weather 810 will result in the audio representation of Text 830 being played (i.e., "Salt Lake City, UT, 49 to 82 F") at step 590. A Links command could also be issued here to identify Salt Lake City, UT 820, but the link would only be followed if the client explicitly selected it.

In contrast, selecting My Front Page Headlines 910 at step 560 does not result in any skipped steps. In step 570, the client will be prompted to select from the first-level links Top Stories from Reuters 920, Tech News from News.com 930, and Top Sports Stories from AP 940. Selecting any of these first-level links in step 570 will result in step 580 prompting for the stories associated with the first-level link. For example, selecting Top Sport Stories from AP 940 in step 570 will lead to step 580 prompting the client to select from NL Playoffs Notebook 942, NFL Roundup 944, and America's Cup Enters Third Day 946. In step 590, an audio representation of the document text corresponding to the selection made in step 580 will be played to the client.

Portfolios 710, Weather 810, and My Front Page Headlines 910 present a large amount of information to the client. As the client moves from one category to another, each category presents an increasing number of links or options. In a visual environment, it is a relatively simple matter for the client to scan a page and remember the links or options that are currently available. However, in an audio representation, it is significantly more difficult to keep the links and options of one page separate from the links and options of

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another page. Therefore, one aspect of the present invention accumulates all links and options from certain pages that are visited and makes the accumulated links and options of a previously visited page available in a subsequent page.

Accumulation is desirable because "pages" are a visual motif that does not necessarily carry over into an audio representation. Particularly in a personal home page environment, a client may view the personal home page as simply a monolithic source of information. Someone familiar with the available content who is moving between various levels in the hierarchy, may find an explicit requirement of returning to a particular page, for the sole purpose of selecting a link or other option from that page, cumbersome or even annoying. Therefore, accumulation preserves the organizational benefits of hierarchical organization—the client continues to be informed regarding the content of a particular page—without limiting the availability of links to only those present on the particular page.

For example, selecting the NL Playoffs Notebook 942 link of Top Sport Stories from AP 940 found in the category My Front Page Headlines 910, will lead to the NL Playoffs Notebook document. That document contains both text and links that are available to the client. In a typical visual browser, if the client next wanted to choose category Weather 810, the user would need to return to Web Page 600 first. However, the present invention, by accumulating links, would allow the client to select Weather 810 from the NL Playoffs Notebook document since Web Page 600 had been previously visited. In a preferred embodiment, accumulation is limited to certain predetermined Web content that would benefit from the feature, such as personal home pages.

In contrast to Figure 5, Figure 11 is a flow chart illustrating the operation of a preferred embodiment of the present invention that provides only the default mapping of separating text and links. In step 1110, a client selects the option of starting with a list of

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favorite Internet sites. Text to Speech 420 prompts the user to select one of the sites listed, step 1120. As before, in step 1130 the document in retrieved using the protocols that are appropriate given the document's location. Again, as before, the content is parsed in step 1140 to identify any title, any links, any link names, and any text included in the document.

Figure 12 is an example of Electronic Content 1200 that is useful in describing the embodiment disclosed in Figure 11. Parsing step 1140 identifies title 1240 (HTML titles are indicated by explicit tags), links and corresponding link names 1210, 1220, and 1230, as well as the document text. With these various elements identified, an audio representation of Electronic Content 1200 is generated in step 1150. Once generated, the document title is reported in step 1160 and is followed by reporting the number of links in step 1170.

Just as with the description of Figure 5, parsing the retrieved document to identify any title, any text, any links, and any corresponding link names that may be present shows how an audio interface may be provided without requiring changes to the document source. Together with the other aspect of the present invention, this provides immediate audio access to dynamic, visually-oriented, content that otherwise would be inaccessible to the prior art.

In the case of the Electronic Content 1200, the present invention reports the document title as Guide to Filing a Utility Patent Application 1240. There are three links, named U.S. Patent and Trademark Office 1210, www.uspto.gov 1220, and Patent and Trademark Depository Library 1230. Then, in step 1180, an audio representation of the electronic document's text is played for or communicated to the user. In the case of Electronic Content 1200, this text includes everything except the title 1240. The client may also choose the global Links command, to hear an audio representation of the three links,

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1210, 1220, and 1230. By choosing a link, the client instructs the present invention to follow the link, as in step 1120, beginning audio interface process anew at step 1130.

The present invention may be embodied in other forms without departing from its spirit or essential characteristics. As properly understood, the preceding description of specific embodiments is illustrative only and in no way restrictive. For example, using Web pages accessible over the Internet to describe the present invention does not limit the invention to any specific format of electronic content or any particular means of accessing electronic content. The scope of the invention is, therefore, indicated by the appended claims as follows.

What is claimed and desired to be secured by United States Letters Patent is:

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1. In a system that includes an information service and an input/output device for interacting with the information service, a method of providing an audio interface for accessing electronic documents, the method comprising the acts of:

obtaining an electronic document;

parsing the electronic document to identify any text and any links included in the electronic document; and

generating an audio representation of at least a portion of the parsed electronic document, the audio representation being communicated to a client.

2. A method as recited in claim 1 further comprising the acts of:

obtaining at least two electronic documents, one of the at least two electronic documents being designated as a prior electronic document and one of the at least two electronic documents being designated as a subsequent electronic document;

parsing the at least two electronic documents to identify any text and any links included in the at least two electronic documents; and

making any links identified in the prior electronic document available in the subsequent electronic document.

3. A method as recited in claim 1 further comprising the act of mapping said any text and said any links included in the electronic document to one or more categories.

4. A method as recited in claim 3 further comprising the acts of generating an audio representation of the one or more categories.

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5. A method as recited in claim 4 further comprising the act of prompting the client to select one of the one or more categories.

6. A method as recited in claim 3 wherein the act of mapping includes creating a hierarchy of said any text and said any links.

7. A method as recited in claim 1 further comprising the act of receiving an instruction from the client.

8. A method as recited in claim 7 wherein the instruction received from the client is at least one of an instruction to email, fax, or voice mail at least a portion of the electronic document to a third party selected from the client's contact list.

9. A method as recited in claim 7 wherein the instruction is spoken into the input/output device.

10. A method as recited in claim 7 wherein the audio representation includes at least one link and wherein the instruction from the client is to select the at least one link, further comprising the act of following the at least one link.

11. A method as recited in claim 1 wherein the audio representation includes only ~~any~~ said links included in the electronic document.

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12. A method as recited in claim 1 wherein the audio representation includes a count of said ~~any~~ links and ~~any~~ said text included in the electronic document.

13. A method as recited in claim 1 wherein the electronic document is written in a markup language.

14. A method as recited in claim 13 wherein the markup language includes elements that only are capable of describing the visual appearance of the electronic document.

15. A method as recited in claim 14 wherein the markup language is one of hypertext markup language and extensible markup language.

16. A method as recited in claim 1 further comprising the act of providing the user with a visual representation of the electronic document simultaneously with the act of communicating the audio representation.

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17. In an information system that has access to electronic documents and is connected to a client by a telephony infrastructure, a method for providing the user with telephone access to an electronic document, the method comprising the acts of:

parsing the electronic document to identify any text and any links included in the electronic document;

mapping said any text and said any links included in the electronic document to one or more categories; and

generating an audio representation of at least a portion of the parsed and mapped electronic document, the audio representation being communicated to a client.

18. A method as recited in claim 17 further comprising the act of prompting the client to select one of the one or more categories.

19. A method as recited in claim 18 further comprising the acts of:

receiving an instruction from the client, the instruction selecting one of the one or more categories; and

prompting the client to select at least one link from the selected category.

20. A method as recited in claim 17 wherein the act of mapping produces exactly one category, further comprising the act of automatically selecting the one category.

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21. A method as recited in claim 17 wherein the act of mapping produces a hierarchy of one or more categories each having one or more links, the hierarchy including one or more levels.

22. A method as recited in claim 21 further comprising the acts of:

prompting the client to traverse the hierarchy of one or more categories and associated one or more links, automatically selecting any category and any associated link when exactly one category and exactly one associated link is present;

receiving one or more instructions from the client to traverse the hierarchy, at least one instruction selecting an electronic document with text; and

generating a audio representation of each part of the hierarchy that is visited, the audio representation of the electronic document with text including a count of any links and any text present in the document.

23. A method as recited in claim 17 further comprising the act of receiving an instruction from the client, wherein the instruction is spoken into the telephone.

24. A method as recited in claim 23 wherein the instruction received from the client is at least one of an instruction to email, fax, or voice mail at least a portion of the electronic document to a third party selected from the client's contact list.

25. A method as recited in claim 17 wherein the information system obtains the electronic document over the Internet.

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26. A method as recited in claim 17 wherein the electronic document is written in a markup language and the markup language includes elements that only are capable of describing the visual appearance of the electronic document.

27. A method as recited in claim 26 wherein the markup language is one of hypertext markup language and extensible markup language.

28. A method as recited in claim 17 further comprising the act of providing the user with a visual representation of the electronic document simultaneously with the act of communicating the audio representation.

29. A method as recited in claim 17 further comprising the acts of:

receiving a request from the client to access the electronic document; and

obtaining the electronic document.

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30. In an information system that has access to electronic documents and is connected to a client by a telephony infrastructure, a method for providing the user with telephone access to an electronic document, the method comprising the acts of:

receiving a request from the client to access the electronic document;

obtaining the electronic document;

parsing the electronic document to identify any text and any links included in the electronic document; and

generating an audio representation of at least a portion of the parsed electronic document, the audio representation being communicated to a client.

31. A method as recited in claim 30 wherein the audio representation includes any said text and a count of said any links included in the electronic document.

32. A method as recited in claim 30 further comprising the act of receiving an instruction from the client.

33. A method as recited in claim 32 wherein the instruction is spoken into the telephone.

34. A method as recited in claim 33 wherein the instruction received from the client is at least one of an instruction to email, fax, or voice mail at least a portion of the electronic document to a third party selected from the client's contact list.

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35. A method as recited in claim 33 wherein the audio representation includes at least one link and wherein the instruction from the client is to select the at least one link, further comprising the act of following the at least one link.

36. A method as recited in claim 30 wherein the audio representation includes only any said links included in the electronic document.

37. A method as recited in claim 36 wherein the audio representation includes one or more links, further comprising the act of prompting the client to select one of the one or more links.

38. A method as recited in claim 30 wherein the electronic document is written in a markup language and the markup language includes elements that are only capable of describing the visual appearance of the electronic document.

39. A method as recited in claim 30 wherein the markup language is one of hypertext markup language and extensible markup language.

40. A method as recited in claim 30 further comprising the act of providing the user with a visual representation of the electronic document simultaneously with the act of communicating the audio representation.

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41. In an information system that has access, through the Internet, to one or more electronic documents, wherein the one or more electronic documents are written in a markup language having elements that only are capable of describing the visual appearance of the one or more electronic documents, and the information system is connected to a client by a telephony infrastructure, a method for providing the user with telephone access to the one more electronic documents, the method comprising the acts of:

obtaining one of the one or more electronic documents;

parsing the one electronic document to identify any text and any links included in the one electronic document; and

generating an audio representation of at least a portion of the parsed one electronic document, the audio representation being communicated to the client.

42. A method as recited in claim 41 further comprising the act of mapping said any text and said any links included in the electronic document to one or more categories.

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43. A method as recited in claim 41 wherein the act of mapping produces a hierarchy of one or more categories each having one or more links, the hierarchy including one or more levels, further comprising the acts of:

prompting the client to traverse the hierarchy of one or more categories and associated one or more links, automatically selecting any category and any associated link when exactly one category and exactly one associated link is present;

receiving one or more instructions from the client to traverse the hierarchy, at least one instruction selecting an electronic document with text; and

generating a audio representation of each part of the hierarchy that is visited, the audio representation of the electronic document with text including a count of any links and any text present in the document.

44. A method as recited in claim 41 further comprising the act of receiving an instruction from the client, wherein the instruction is spoken into the telephone.

45. A method as recited in claim 44 wherein the instruction received from the client is at least one of an instruction to email, fax, or voice mail at least a portion of the electronic document to a third party selected from the client's contact list.

46. A method as recited in claim 44 wherein the audio representation includes at least one link and wherein the instruction from the client is to select the at least one link, further comprising the act of following the at least one link.

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47. A method as recited in claim 41 further comprising the act of providing the user with a visual representation of the electronic document simultaneously with the act of communicating the audio representation.

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48. In a system that includes an information service and an input/output device for interacting with the information service, a method providing an audio interface to navigating between a plurality of electronic documents, the method comprising the acts of:

obtaining a first electronic document;

parsing the first electronic document to identify any text and any links included in the first electronic document;

generating an first audio representation of at least a portion of the parsed first electronic document, the first audio representation being communicated to a client;

obtaining a second electronic document

parsing the second electronic document to identify any text and any links included in the second electronic document; and

making any links identified in the first electronic document available for selection in the second electronic document.

49. A method as recited in claim 48 further comprising the acts of:

mapping said any text and said any links included in the electronic document to one or more categories; and

generating an audio representation of the one or more categories.

50. A method as recited in claim 48 further comprising the act of receiving an instruction from a client, wherein the instruction is spoken by the client.

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51. A system providing access, through an audio interface, to electronic documents, wherein the electronic documents are written in a markup language having elements that only are capable of describing the visual appearance of the electronic documents, the system comprising:

processor means for obtaining an electronic document;

processor means for parsing the electronic document to identify any text and any links included in the electronic document; and

processor means for generating an audio representation of at least a portion of the parsed electronic document, the audio representation being communicated to a client.

52. A system as recited in claim 51 further comprising processor means for mapping said any text and said any links included in the electronic document to one or more categories.

53. A system as recited in claim 51 further comprising processor means for receiving a spoken instruction from the client.

54. A system as recited in claim 53 wherein the instruction received from the client is at least one of an instruction to email, fax, or voice mail at least a portion of the electronic document to a third party selected from the client's contact list.

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55. A system as recited in claim 53 wherein the audio representation includes at least one link and wherein the instruction from the client is to select the at least one link, further comprising processor means for following the at least one link.

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56. A computer program product for providing access, through an audio interface, to electronic documents, wherein the electronic documents are written in a markup language having elements that only are capable of describing the visual appearance of the electronic documents, the computer program product comprising:

a computer-readable medium carrying computer-executable instructions for implementing the method, the computer-executable instructions comprising:

program code means for obtaining an electronic document;

program code means for parsing the electronic document to identify any text and any links included in the electronic document; and

program code means for generating an audio representation of at least a portion of the parsed electronic document, the audio representation being communicated to a client.

57. A computer-readable medium as recited in claim 56 wherein the computer-executable instructions further comprises program code means for mapping said any text and said any links included in the electronic document to one or more categories.

58. A computer-readable medium as recited in claim 56 wherein the computer-executable instructions further comprises program code means for receiving a spoken instruction from the client.

59. A computer-readable medium as recited in claim 58 wherein the instruction received from the client is at least one of an instruction to email, fax, or voice mail at least a portion of the electronic document to a third party selected from the client's contact list.

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60. A computer-readable medium as recited in claim 58 wherein the audio representation includes at least one link and wherein the instruction from the client is to select the at least one link, wherein the computer-executable instructions further comprises program code means for following the at least one link.

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ABSTRACT OF THE INVENTION

Methods, systems, and computer program products for providing an audio interface to electronic documents. An audio interface receives a request for electronic content from a client and retrieves the requested document. Next, the document is parsed to identify various elements, such as title, text, and links included in the document. Many of those providing electronic content include hierarchical indices to aid clients in finding documents covering a particular topic. The audio interface includes a facility to preserve, enhance, or create this hierarchical organization by mapping a document's text and links into a corresponding audio hierarchy. The client is then presented with various options from which to make a selection. Outside of this hierarchy, the client receives the document title, the number of links contained within the document, an audio representation of the document's text, and may optionally chose to hear only the links included in the document. The audio interface also includes a number of global commands to facilitate navigation.

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Express Mail Label No. EL 446 775 357 US

PATENT APPLICATION
Docket No: 14999.3

DECLARATION CLAIMING SMALL ENTITY STATUS
FOR A SMALL BUSINESS CONCERN

I, David L. Morton, hereby declare: that I am President of talk2.com, a corporation of the State of Nevada and having a principal place of business at 746 East Winchester Avenue, #210, Salt Lake City, UT 84107; I am empowered to act on behalf of talk2.com; and that talk2.com qualifies as a small business concern as defined in 13 C.F.R. § 121.3-18 and 37 C.F.R. § 1.9(d), for purposes of paying reduced fees to the Patent and Trademark Office under Section 41(a) and (b) of Title 35, United States Code, in that the number of employees of talk2.com, including those of its affiliates, does not exceed 500 persons. I understand that, for purposes of this declaration, (1) the number of employees is the average over the previous fiscal year of the number of persons employed on a full-time, part-time, or temporary basis during each of the pay periods of the fiscal year, and that (2) two business concerns are considered to be affiliates of each other when one business concern either directly or indirectly controls or has the power to control the other, or when a third party or parties control or have the power to control both business concerns.

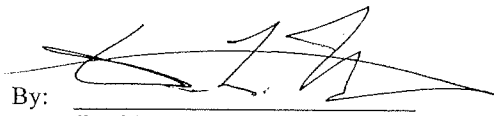
I further declare that all rights, title, and interest relating to the invention entitled "VOICE INTERFACE FOR ELECTRONIC DEVICE," invented by Darren L. Wesemann, Dong-Kyun Nam, and Richard T. Newton, as described in the patent application filed concurrently herewith have been conveyed to and currently remain with talk2.com.

I acknowledge the duty to file, in the above-mentioned application or any patent issued in respect thereof, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of (1) the issue fee or (2) any

maintenance fee due after the date on which status as a small entity is no longer appropriate. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful, false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.

Signed at Salt Lake City, Utah, this 15 day of December, 1999.

talk2.com



By: _____
David L. Morton,
President

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Document Number

Express Mail Label No. EL 446 775 357 US

PATENT APPLICATION
Docket No: 14999.3

DECLARATION, POWER OF ATTORNEY, AND PETITION

We,

(1) Name: Darren L. Wesemann
Address: 229 North Fairway Drive
North Salt Lake, UT 84054
Citizenship: United States of America

(2) Name: Dong-Kyun Nam
Address: 847 East 7440 South #20
Midvale, UT 84047
Citizenship: Korea

(3) Name: Richard T. Newton
Address: 372 East 1310 South
Kaysville, UT 84037
Citizenship: United States of America

declare: that our citizenship, residence address, and post office address are as set forth above; that we verily believe we are the original, first, and joint inventors of the subject matter of the invention or discovery entitled "VOICE INTERFACE FOR ELECTRONIC DOCUMENTS" for which a patent is sought and which is described and claimed in the specification attached hereto; that we have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment specifically referred to herein; and that we acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Section 1.56(a) of Title 37 of the Code of Federal Regulations.

We declare further that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States

Code, and that such willful, false statements may jeopardize the validity of the application or any patent issuing thereon.

We hereby appoint as our attorneys and/or patent agents: RICK D. NYDEGGER, Registration No. 28,651; DAVID O. SEELEY, Registration No. 30,148; JONATHAN W. RICHARDS, Registration No. 29,843; JOHN C. STRINGHAM, Registration No. 40,831; BRADLEY K. DeSANDRO, Registration No. 34,521; JOHN M. GUYNN, Registration No. 36,153; CHARLES L. ROBERTS, Registration No. 32,434; GREGORY M. TAYLOR, Registration No. 34,263; DANA L. TANGREN, Registration No. 37,246; KEVIN B. LAURENCE, Registration No. 38,219; ERIC L. MASCHOFF, Registration No. 36,596; C. J. VEVERKA, Registration No. 40,858; ROBYN L. PHILLIPS, Registration No. 39,330; RICHARD C. GILMORE, Registration No. 37,335; DAVID B. DELLENBACH, Registration No. 39,166; KEVIN K. JOHANSON, Registration No. 38,506; DAVID L. GRIFFIN, Registration No. 44,136; R. BURNS ISRAELSEN, Registration No. 42,685; DAVID R. TODD, Registration No. 41,348; JESÚS JUANÓS i TIMONEDA, Registration No. 43,332; STEPHEN D. PRODNUK, Registration No. 43,020; R. PARRISH FREEMAN, JR., Registration No. 42,556; ADRIAN J. LEE, Registration No. 42,785; and KYLE H. FLINDT, Registration No. 42,539, with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith. All correspondence and telephonic communications should be directed to:

R. Burns Israelsen
WORKMAN, NYDEGGER & SEELEY
1000 Eagle Gate Tower
60 East South Temple
Salt Lake City, Utah 84111
Telephone: (801) 533-9800
Facsimile: (801) 328-1707

Wherefore, we pray that Letters Patent be granted to us for the invention or discovery described and claimed in the foregoing specification and claims, declaration, power of attorney, and this petition.

Dated this 15 day of December, 1999.

Inventor: _____
Darren L. Wesemann
229 North Fairway Drive
North Salt Lake, UT 84054

Dated this 15 day of December, 1999.

Inventor: _____
Dong-Kyun Nam
847 East 7440 South #20
Midvale, UT 84047

Dated this 15 day of December, 1999.

Inventor: _____
Richard T. Newton
~~229 North Fairway Drive~~ 372 East 1310 South
~~North Salt Lake, UT 84054~~ Kaysville, UT 84037

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PRINT OF DRAWINGS
AS ORIGINALLY FILED

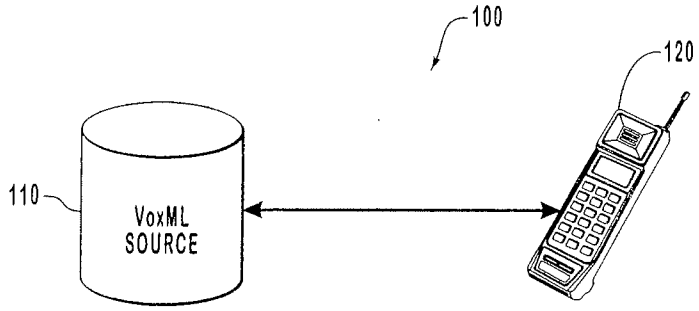

FIG. 1
(PRIOR ART)

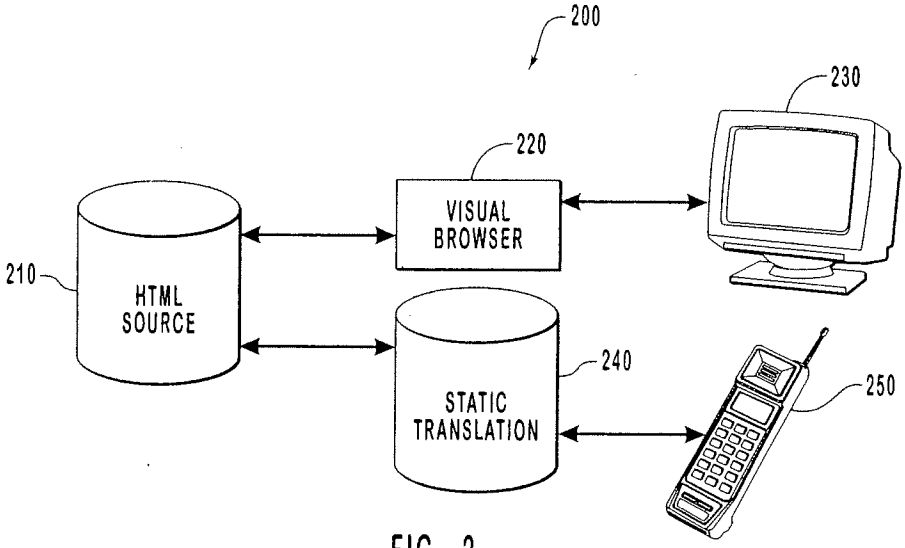

FIG. 2
(PRIOR ART)

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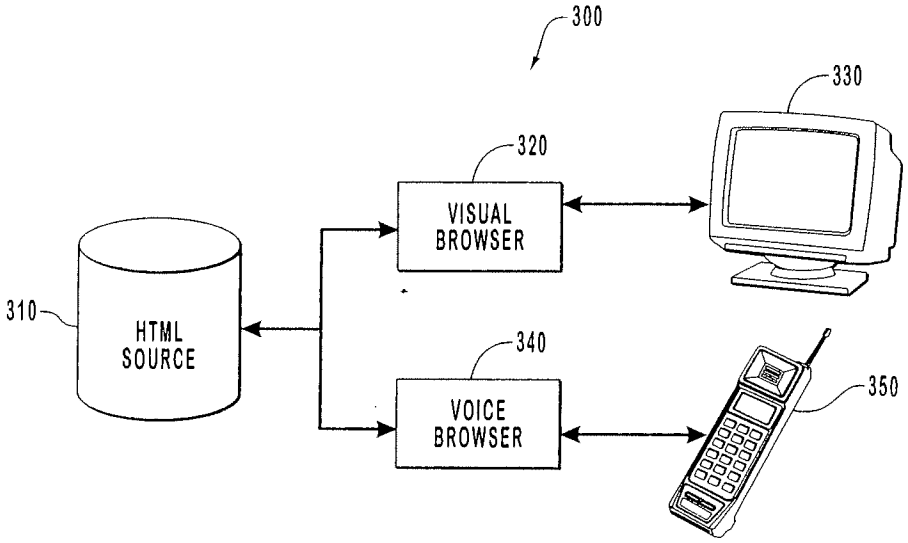

FIG. 3

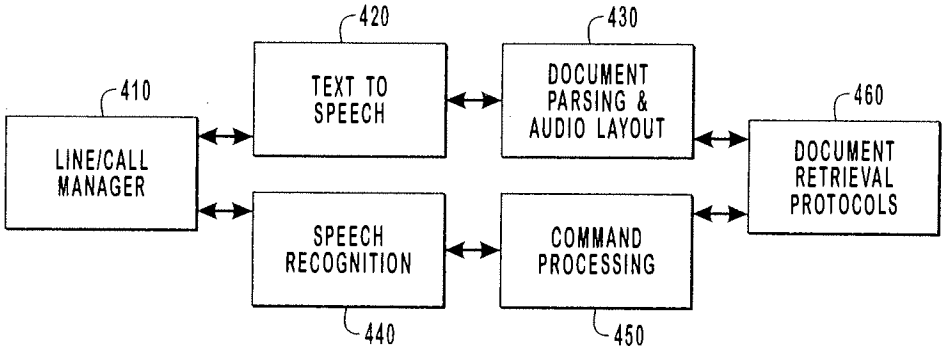

FIG. 4

PRINT OF DRAWINGS
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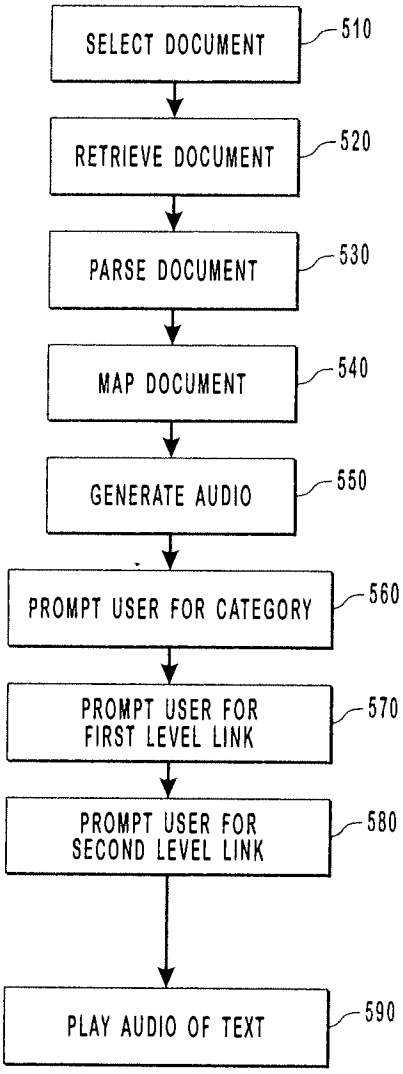

FIG. 5

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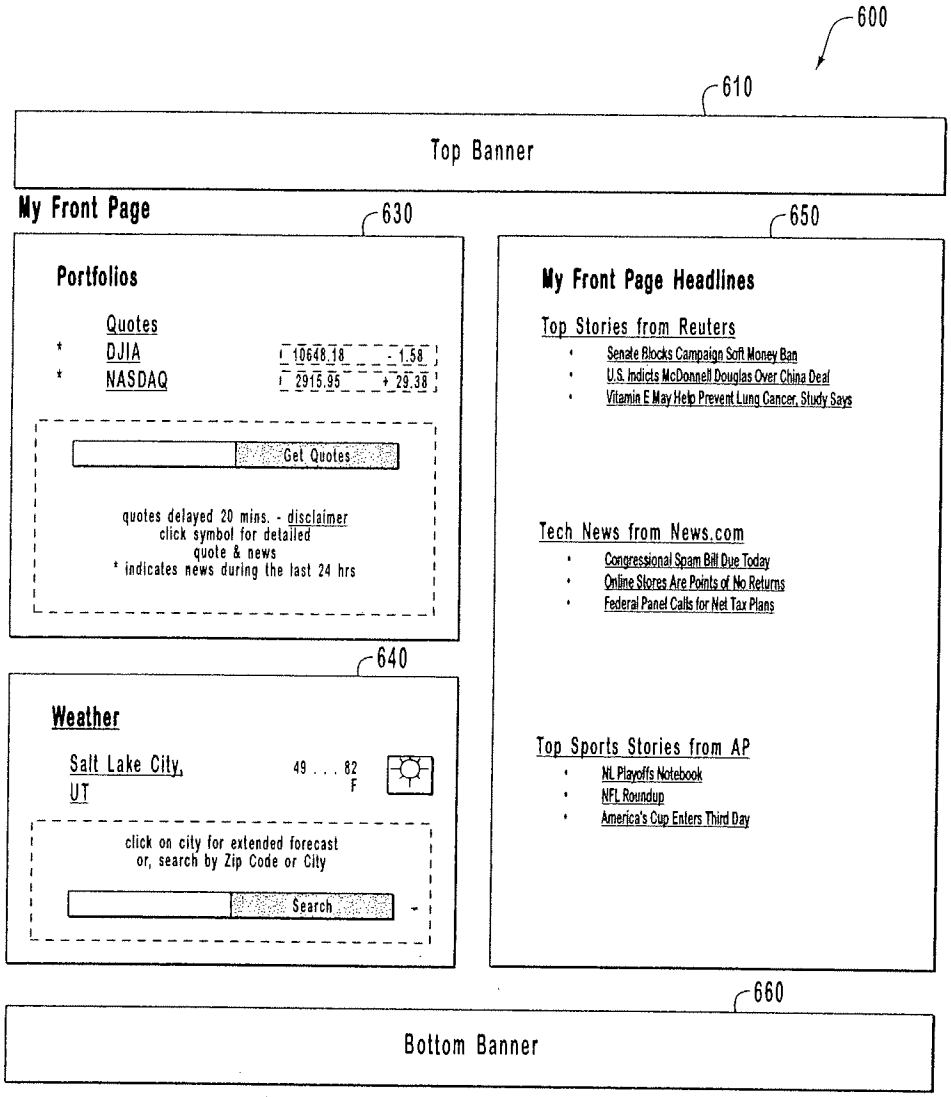

FIG. 6

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AS ORIGINALLY FILED

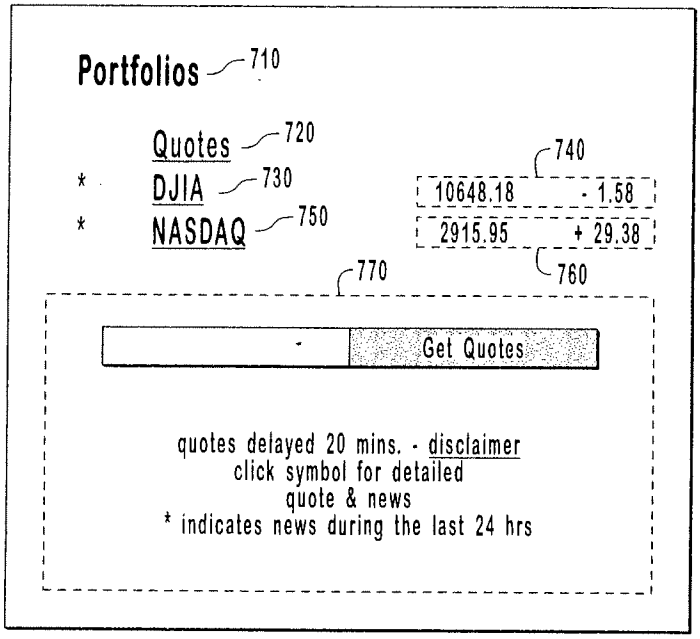

FIG. 7

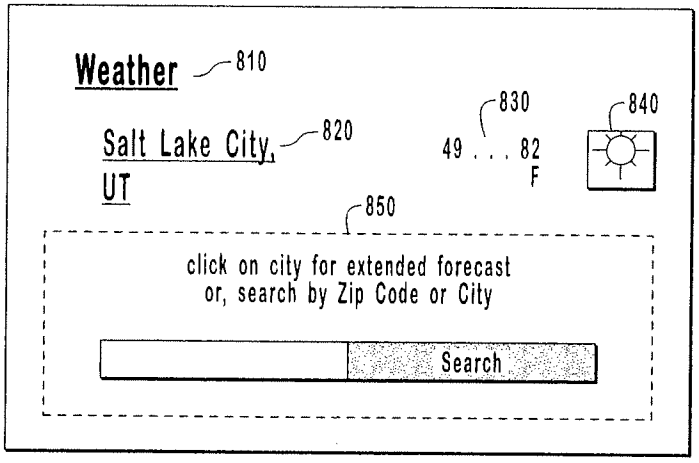

FIG. 8

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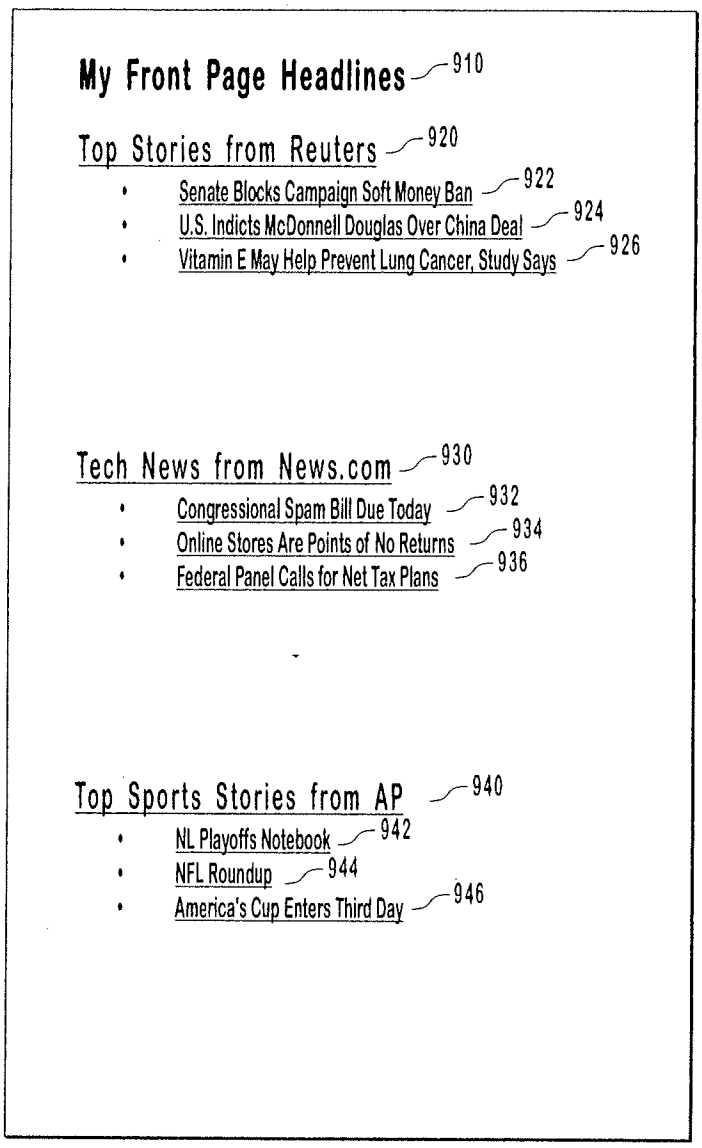

FIG. 9

PRINT OF DRAWINGS
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Categories — 1010
- Portfolios — 710
- Weather — 810
- My Front Page Headlines — 910

First-Level Links — 1020
- Quotes — 720
- Salt Lake City, UT — 820
- Top Stories from Reuters — 920
- Tech News from News.com — 930
- Top Sport Stories from Reuters — 940

Second-Level Links — 1030
- DIJA — 730
- NASDAQ — 750
- Story Headlines — 922-926, 932-936, 942-946

Text of Stories — 1040

FIG. 10

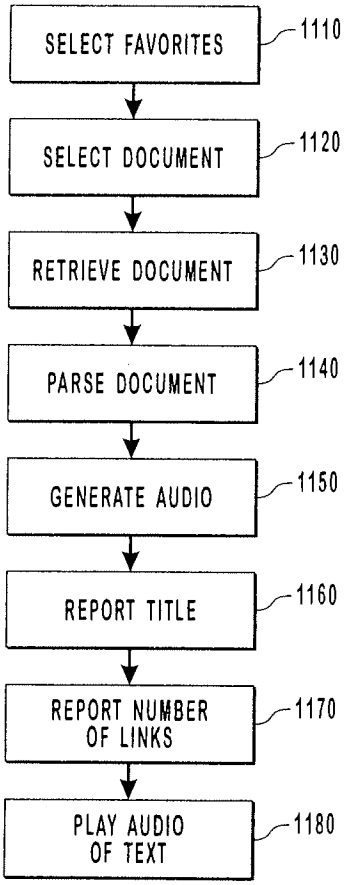

FIG. 11

PRINT OF DRAWINGS
AS ORIGINALLY FILED

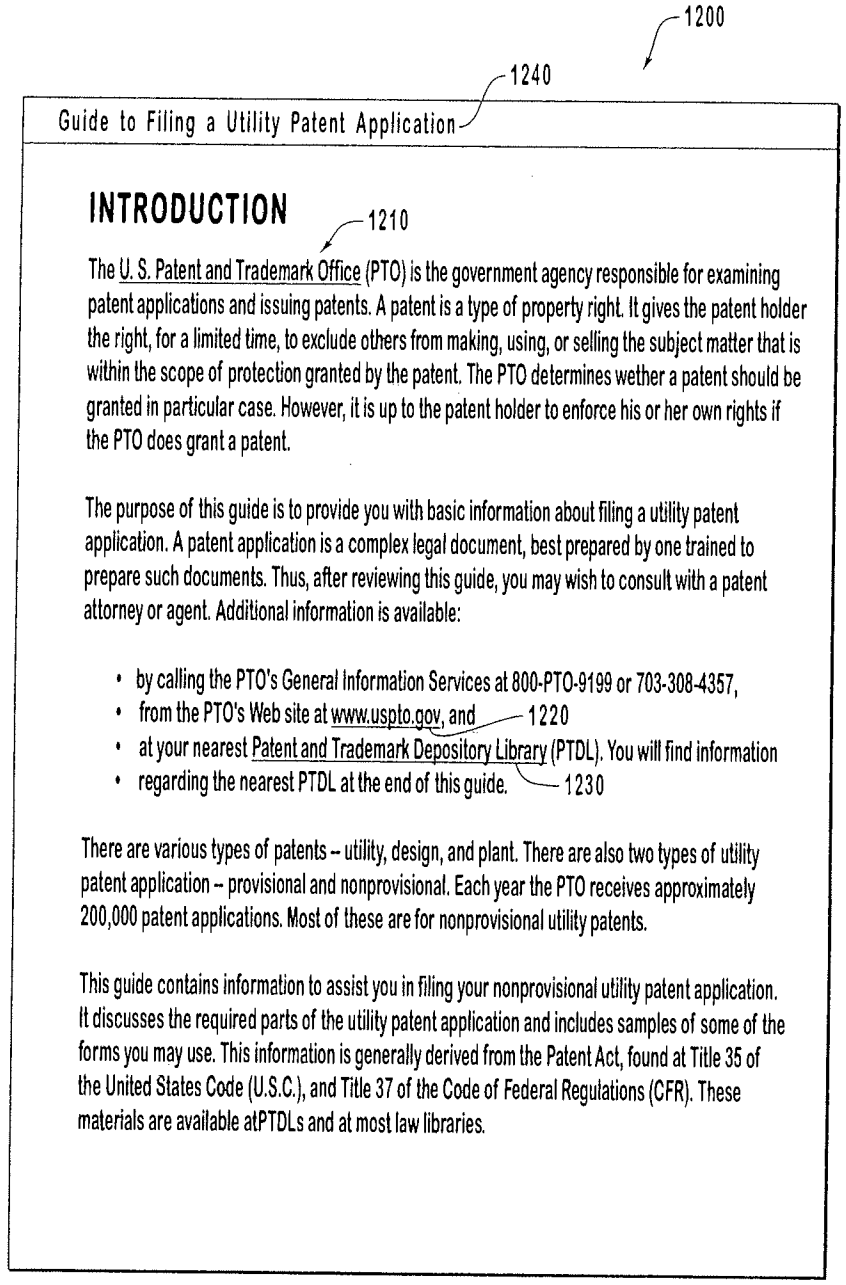

FIG. 12

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Form PTO-1449

Applicant: Darren L. Wesemann, et al.

Serial No.: 09/464,989

Filing Date: December 16, 1999

For: VOICE INTERFACE FOR ELECTRONIC DOCUMENTS

Sheet 1 of 1

Att'y Docket No.: 14999.3

Group: 2748

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INFORMATION DISCLOSURE CITATIONS MADE BY APPLICANT

U.S. Patent Documents

Examiner Initial*		Patent Number	Issue Date	Name	Class	Sub Class	Filing Date
MP	A1	5,799,063	08/25/98	Krane	379	~~88~~ 88.17	08/15/~~96~~
MP	A2	5,884,262	03/16/99	Wise et al.	704	270.1	03/28/~~96~~

References Cited by Applicants

While the filing of Information Disclosure Statements is voluntary, the procedure is governed by the guidelines of Section 609 of the Manual of Patent Examining Procedure and 37 C.F.R. §§ 1.97 and 1.98. To be considered a proper Information Disclosure Statement, Form PTO-1449 shall be accompanied by a copy of each listed patent or publication or other item of information and a translation of the pertinent portions of foreign documents (if an existing translation is readily available to the applicant), an explanation of relevance of each reference not in the English language, and should be submitted in a timely manner as set out in MPEP Sec. 609.

Examiners will consider all citations submitted in conformance with 37 C.F.R. § 1.98 and MPEP Sec. 609 and place their initials adjacent the citations in the spaces provided on this form. Examiners will also initial citations not in conformance with the guidelines which may have been considered. A reference may be considered by the Examiner for any reason whether or not the citation is in full conformance with the guidelines. A line will be drawn through a citation if it is not in conformance with the guidelines AND has not been considered. A copy of the submitted form, as reviewed by the Examiner, will be returned to the applicant with the next communication. The original of the form will be entered into the application file.

Each citation initialed by the Examiner will be printed on the issued patent in the same manner as references cited by the Examiner on Form PTO-892.

The reference designations "A1," "A2," etc. (referring to Applicant's reference 1, Applicant's reference 2, etc.) will be used by the Examiner in the same manner as Examiner's reference designations "A," "B," "C," etc. on Office Action Form PTO-1142.

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Examiner: Mary Phillips **Date Considered:** 02/14/01

***EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.**

Notice of References Cited	Application/Control No. 09/464,989	Applicant(s)/Patent Under Reexamination WESEMANN ET AL.	
	Examiner Nora J Putt	Art Unit 2645	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification	
	A	US-5884262-A	03-1999	Wise et al.	704	270
	B	US-5953392-A	09-1999	Rhie et al.	379	88.13
	C	US-6157705-A	12-2000	Perrone	379	88.01
	D	US-5915001-A	06-1999	Uppaluru	379	88.22
	E	US- -				
	F	US- -				
	G	US- -				
	H	US- -				
	I	US- -				
	J	US- -				
	K	US- -				
	L	US- -				
	M	US- -				

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification	
	N	- -					
	O	- -					
	P	- -					
	Q	- -					
	R	- -					
	S	- -					
	T	- -					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

PATENT APPLICATION FEE DETERMINATION RECORD
Effective November 10, 1998

Application or Docket Number: 09/404,989

CLAIMS AS FILED - PART I

	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA
FOR		
BASIC FEE		
TOTAL CLAIMS	40 minus 20=	* 20
INDEPENDENT CLAIMS	1 minus 3 =	* 0
MULTIPLE DEPENDENT CLAIM PRESENT		

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐		OR	OTHER THAN SMALL ENTITY	
RATE	FEE		RATE	FEE
	380.00	OR		760.00
X$ 9=	360	OR	X$18=	720
X39=	156	OR	X78=	312
+130=		OR	+260=	
TOTAL	516	OR	TOTAL	1792

CLAIMS AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	* 40	Minus	** 20	= 20
Independent	* 1	Minus	*** 3	= 0
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				

SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=	360	OR	X$18=	
X39=	156	OR	X78=	
+130=		OR	+260=	
TOTAL ADDIT. FEE	516	OR	TOTAL ADDIT. FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X39=		OR	X78=	
+130=		OR	+260=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 9=		OR	X$18=	
X39=		OR	X78=	
+130=		OR	+260=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

*U.S. Government Printing Office: 1999 — 459-072/19142

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PATENT APPLICATION
Docket No: 14999.3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	Darren L. Wesemann, et al.	)
Serial No.:	09/464,989	)
Filed:	December 16, 1999	) 2748
For:	VOICE INTERFACE FOR ELECTRONIC DOCUMENTS	)

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INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. § 1.97

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

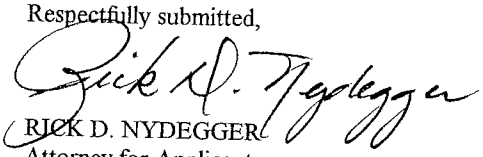
Please find, pursuant to 37 C.F.R. § 1.98(a)(1), the enclosed Form PTO-1449 which contains a list of all patents, publications, or other items that have come to the attention of one or more of the individuals designated in 37 C.F.R. § 1.56(c). While no representation is made that any of these references may be "prior art" within the meaning of that term under 35 U.S.C. §§ 102 or 103, the enclosed list of references is disclosed so as to fully comply with the duty of disclosure set forth in 37 C.F.R. § 1.56.

Moreover, while no representation is made that a specific search of office files or patent office records has been conducted or that no better art exists, the undersigned attorney of record believes that the enclosed art is the closest to the claimed invention (taken in its entirety) of which the undersigned is presently aware, and no art which is closer to the claimed invention (taken in its entirety) has been knowingly withheld.

In accordance with 37 C.F.R. §§ 1.97 and 1.98, a copy of each of the listed references or relevant portion thereof is also enclosed.

Dated this 28 day of MARCH, 2000.

Respectfully submitted,



RICK D. NYDEGGER
Attorney for Applicant
Registration No. 28,651

WORKMAN, NYDEGGER & SEELEY
1000 Eagle Gate Tower
60 East South Temple
Salt Lake City, Utah 84111
Telephone: (801) 533-9800
Facsimile: (801) 328-1707

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03-29-00

2748

CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR § 1.10) Applicant(s): Darren E. Wesemann, et al.			Docket No. 14999.3
Serial No. 09/464,989	Filing Date December 16, 1999	Examiner unassigned	Group Art Unit 2748
For: VOICE INTERFACE FOR ELECTRONIC DOCUMENTS			

I hereby certify that the Transmittal Letter (in triplicate); Information Disclosure Statement under 37 C.F.R. § 1.97 (2pgs); Form PTO-1449 (1pg); Legible copies of two (2) references; and postcard are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10 in an envelope addressed to: The Assistant Commissioner of Patents, Washington, D.C. 20231 on

MARCH 28, 2000.

DACIA SMITH

(Typed or Printed Name of Person Mailing Correspondence)

Dacia Smith

(Signature of Person Mailing Correspondence)

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("Express Mail" Label Number)

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PATENT APPLICATION
Docket No.: 14999.3

WORKMAN NYDEGGER & SEELEY
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GREGORY M. TAYLOR
DANA L. TANGREN
KEVIN B. LAURENCE
ERIC L. MASCHOFF
CHARLES J. VEVERKA
ROBYN L. PHILLIPS
RICHARD C. GILMORE†
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

TRANSMITTAL FOR INFORMATION DISCLOSURE STATEMENT

RECEIVED
MAR 30 2000
TC 2700 MAIL ROOM

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

Transmitted herewith for filing and pursuant to 37 C.F.R. § 1.97 is an Information Disclosure Statement.

Enclosed also are the following designated documents, as required under 37 C.F.R. §§ 1.97 and 1.98:

X Form PTO-1449 list of two (2) references submitted for consideration.

X Legible copies of the listed references or their relevant portions.

___ All English translations of each nonenglish reference, if any, within the possession, custody, control or availability of anyone designated in 37 C.F.R. § 1.56(c) (see 37 C.F.R. § 1.98(c)).

The following are included within the Information Disclosure Statement if applicable and as required under 37 C.F.R. § 1.98:

___ Concise explanation of relevance of each reference not in English and unaccompanied by an English translation.

___ Statement that certain listed references not enclosed are substantially cumulative of an enclosed reference.

___ Statement that certain listed references not enclosed were previously cited by or submitted to the Office in the identified prior application which is relied upon for an earlier filing date under 35 U.S.C. § 120.

In order to secure consideration of the items designated above, one or more of the following, if required, is also enclosed:

__ Promptness Certification.

__ Check No. _____ in the amount of $240.00 constituting submission fee under 37 C.F.R. 1.17(p);

__ Petition for Consideration and Check No. _____ in the amount of $_____.

X In the event that 37 C.F.R. § 1.97(c) applies and the Examiner is not satisfied that the Promptness Certification meets the requirements of 37 C.F.R. § 1.97(e), or in any other event remediable by a fee, please credit any over payment or charge any additional fees to Deposit Account No. 23-3178 of the undersigned.

Dated this 28 day of MARCH, 2000.

Respectfully submitted,

Rick D. Nydegger

RICK D. NYDEGGER
Attorney for Applicant
Registration No. 28,651

WORKMAN, NYDEGGER & SEELEY
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OIPE JC63 MAR 28 2000 PATENT & TRADEMARK OFFICE

Sheet 1 of 1

Form PTO-1449

Applicant: Darren L. Wesemann, et al.

Serial No.: 09/464,989 Att'y Docket No.: 14999.3

Filing Date: December 16, 1999 Group: 2748

For: VOICE INTERFACE FOR ELECTRONIC DOCUMENTS

INFORMATION DISCLOSURE CITATIONS MADE BY APPLICANT

TC 2700 MAIL ROOM RECEIVED MAR 30 2000

U.S. Patent Documents

Examiner Initial*		Patent Number	Issue Date	Name	Class	Sub Class	Filing Date
MP	A1	5,799,063	08/25/98	Krane	379	67	08/15/96
MP	A2	5,884,262	03/16/99	Wise et al.	704	270	03/28/96

References Cited by Applicants

While the filing of Information Disclosure Statements is voluntary, the procedure is governed by the guidelines of Section 609 of the Manual of Patent Examining Procedure and 37 C.F.R. §§ 1.97 and 1.98. To be considered a proper Information Disclosure Statement, Form PTO-1449 shall be accompanied by a copy of each listed patent or publication or other item of information and a translation of the pertinent portions of foreign documents (if an existing translation is readily available to the applicant), an explanation of relevance of each reference not in the English language, and should be submitted in a timely manner as set out in MPEP Sec. 609.

Examiners will consider all citations submitted in conformance with 37 C.F.R. § 1.98 and MPEP Sec. 609 and place their initials adjacent the citations in the spaces provided on this form. Examiners will also initial citations not in conformance with the guidelines which may have been considered. A reference may be considered by the Examiner for any reason whether or not the citation is in full conformance with the guidelines. A line will be drawn through a citation if it is not in conformance with the guidelines AND has not been considered. A copy of the submitted form, as reviewed by the Examiner, will be returned to the applicant with the next communication. The original of the form will be entered into the application file.

Each citation initialed by the Examiner will be printed on the issued patent in the same manner as references cited by the Examiner on Form PTO-892.

The reference designations "A1," "A2," etc. (referring to Applicant's reference 1, Applicant's reference 2, etc.) will be used by the Examiner in the same manner as Examiner's reference designations "A," "B," "C," etc. on Office Action Form PTO-1142.

G:\DATA\WPDOCSRN\talk2.com\otherdoc\0315 1449 3.doc

Examiner: Mary J. Dieu **Date Considered:** 02/14/01

***EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.**

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

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D.J. #3 12-8-00 Change of Address

CHANGE OF ADDRESS/POWER OF ATTORNEY

2642

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FILE LOCATION 27C1 SERIAL NUMBER 09464989 PATENT NUMBER

THE CORRESPONDENCE ADDRESS HAS BEEN CHANGED TO CUSTOMER # 22913

THE PRACTITIONERS OF RECORD HAVE BEEN CHANGED TO CUSTOMER # 22913

THE FEE ADDRESS HAS BEEN CHANGED TO CUSTOMER # 22913

ON 08/31/00 THE ADDRESS OF RECORD FOR CUSTOMER NUMBER 22913 IS:

WORKMAN NYDEGGER & SEELEY
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY UT 84111

AND THE PRACTITIONERS OF RECORD FOR CUSTOMER NUMBER 22913 ARE:

28651	29843	30148	32434	34263	34521	36153	36596	37246	37335
38219	38506	39166	39330	40831	40858	41348	42539	42556	42685
42785	43332	44136	44515	45454	45576	45666	46081		

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THIS FILE IS ASSIGNED TO GAU 2742.

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/464,989	12/16/99	WESEMANN	D 14999.3

EXAMINER	
PUTT, N	
ART UNIT	PAPER NUMBER
2645	4

DATE MAILED: 02/23/01

022913
WORKMAN NYDEGGER & SEELEY
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY UT 84111

WM02/0223

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

1- File Copy

Office Action Summary	Application No.	Applicant(s)	
	09/464,989	WESEMANN ET AL.	
	Examiner	Art Unit	
	Nora J Putt	2645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 December 1999* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-60* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-60* is/are rejected.

7)☒ Claim(s) *11,12 and 48* is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15)☒ Notice of References Cited (PTO-892)
16)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18)☐ Interview Summary (PTO-413) Paper No(s). _____ .
19)☐ Notice of Informal Patent Application (PTO-152)
20)☐ Other: .

DETAILED ACTION

Claim Objections

1. Claims 11, 12 and 48 are objected to because of the following informalities: In the second line of claim 11, and in the second line of claim 12, the words "any said" should be reversed to read "said any". Also, in the second line of the claim 48, the word "to" following "interface" should be changed to "for" or alternatively, the word "navigating" should be changed to "navigate". Also in claim 48, in the seventh line of the claim, the word "an" following "generating" should be changed to "a". Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-7, 9-23, 25-33, 35-44, 46-53, 55-58 and 60 are rejected under 35 U.S.C. 102(e) as being anticipated by Wise et al. (US 5884262, March 1999).

4. Regarding claims 1 drawn to a system that includes an information service and an input/output device for interacting with the information service, applicant claims a method of providing an audio interface for accessing electronic documents, the method comprising the acts of: obtaining an electronic document; parsing the electronic document to identify any text and

any links included in the electronic document; and generating an audio representation of at least a portion of the parsed electronic document. Wise et al. teaches providing an audio interface for accessing electronic documents, the method comprising the acts of: obtaining an electronic document; parsing the electronic document to identify any text and any links included in the electronic document; and generating an audio representation of at least a portion of the parsed electronic document (See abstract and column 2 lines 5-33).

5. Regarding claims 2 and 48 drawn to the invention of claim 1, applicant further claims obtaining at least two electronic documents, one of the at least two electronic documents being designated as a prior electronic document and one of the at least two electronic documents being designated as a subsequent electronic document (or as stated in claim 48, obtaining a first and second electronic document); parsing the at least two electronic documents to identify any text and links included in the at least two electronic documents (or as stated in claim 48, parsing the first and then the second electronic document); and making any links identified in the prior electronic document available in the subsequent electronic document (where the audio representation of claim one relates to the first document). Wise et al. teaches obtaining at least two electronic documents, one of the at least two electronic documents being designated as a prior electronic document and one of the at least two electronic documents being designated as a subsequent electronic document (or as stated in claim 48, obtaining a first and second electronic document) (See column 2 lines 59-62); parsing the at least two electronic documents to identify any text and links included in the at least two electronic documents (or as stated in claim 48, parsing the first and then the second electronic document) (See column 2 lines 64-67 and column 5 lines 66-67 and column 6 lines 1-14); and making any links identified in the prior electronic

document available in the subsequent electronic document (where the audio representation of claim one relates to the first document) (See column 6 lines 1-14).

6. Regarding claims 3, 7, 12-13, and 16 drawn to the invention of claim 1, applicant claims further the act of mapping said any text and said any links included in the electronic document to one or more categories; the act of receiving an instruction from the client; and the act of providing the user with a visual representation of the electronic document simultaneously with the act of communicating the audio representation; and wherein the audio representation includes a count of said any links and said any text included in the electronic document; and wherein the electronic document is written in markup language. Wise et al. teaches the act of mapping said any text and said any links included in the electronic document to one or more categories (See column 2 lines 18-29 and column 5 line 67 and column 6 lines 1-4 and column 7 lines 13-27); the act of receiving an instruction from the client (See column 2 lines 42-50); and the act of providing the user with a visual representation of the electronic document simultaneously with the act of communicating the audio representation (See column 8 lines 50-54); and wherein the audio representation includes a count of said any links and said any text included in the electronic document (See column 6 lines 52-64); and wherein the electronic document is written in markup language (See column 2 lines 9-11 - where HTML is an exemplary markup language).

7. Regarding claims 4 and 6 drawn to the invention of claims 1 and 3, applicant claims further the acts of generating an audio representation of the one or more categories; and wherein the act of mapping includes creating a hierarchy of said any text and said any links. Wise et al. teaches the acts of generating an audio representation of the one or more categories (See column

2 lines 18-29); and wherein the act of mapping includes creating a hierarchy of said any text and said any links (See column 7 lines 13-27).

8. Regarding claim 5 drawn to the invention of claims 1, 3 and 4, applicant further claims the act of prompting the client to select one of the one or more categories. Wise et al. teaches prompting the client to select one of the one or more categories (See column 2 lines 43-48 and column 6 lines 58-67).

9. Regarding claims 9-11 drawn to the invention of claims 1 and 7, applicant claims further the instruction received from the client is spoken into the input/output device; and wherein the audio representation includes at least one link and wherein the instruction from the client is to select the at least one link, further comprising the act of following the at least one link; and wherein the audio representation includes only any said links included in the electronic document. Wise et al. the instruction received from the client is spoken into the input/output device (See column 2 lines 42-50); and wherein the audio representation includes at least one link and wherein the instruction from the client is to select the at least one link, further comprising the act of following the at least one link (See column 7 lines 7-33); and wherein the audio representation includes only any said links included in the electronic document (See column 7 lines 2-6).

10. Regarding claims 14 and 15 drawn to the invention of claims 1 and 13, applicant further claims the markup language includes elements that only are capable of describing the visual appearance of the electronic document; and wherein the markup language is one of hypertext markup language and extensible markup language. Wise et al. teaches the markup language includes elements that only are capable of describing the visual appearance of the electronic

document (See column 3 lines 19-24); and wherein the markup language is one of hypertext markup language and extensible markup language (See column 2 lines 7-11 and column 7 lines 28-33).

11. Regarding claim 20, drawn the invention of claim 17, applicant further claims wherein the act of mapping produces exactly one category, and further comprising the act of automatically selecting the one category. Wise et al. teaches the act of mapping producing exactly one category, and further comprising the act of automatically selecting the one category (See column 7 lines 7-11).

12. Regarding claims 17-19 and 21-23, 25-33, 35, 37-44, 46-53 and 55-58 and 60, all elements of the claimed limitations are disclosed in the above rejections and therefore these claims (considered separately or in any combination) are also rejected as anticipated by Wise et al.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 8, 11, 24, 34, 36, 45, 54, and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wise et al. in view of Rhie et al. (US 5953392, September 1999).

15. Regarding claims 8, 24, 34, 45, 54, and 59 drawn to the inventions of claims 1, 7, 17, 23, 41, 44, 51, 53 and 56, applicant claims wherein the instruction received from the client is at least one of an instruction to email, fax, or voice mail at least a portion of the electronic document to a

third party selected from the client's contact list. Wise et al. teaches all the limitations of claims 1, 7, 17, 23, 41, 44, 51, 53, and 56 as described in paragraphs 4, 6 and 12 above. Wise et al. further teaches the instruction received from the client is to fax at least a portion of said electronic document to the user's facsimile machine or computer. Wise does not teach the client sending at least a portion of the electronic document to a third party selected from the client's contact list. Rhie et al. teaches a method and apparatus for telephonically accessing and navigating the internet with a document delivery subsystem which provides a method for delivering an electronic document via one of the well known and available methods such as voice, fax-on-demand, electronic mail or regular mail (See abstract - last 5 lines, and column 6 lines 23-33). One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teaching of Rhie, providing multiple flexible methods of delivering information accessed by telephony device, with the teaching of Wise for the desirable purpose of providing a method of accessing and retrieving information from interconnected networks for those who have limited hardware and/or software or who have no means other than telephone to do so (See Rhie, column 1 lines 34-42).

16. Regarding claims 11 and 36 drawn to the invention of claims 1 and 30, applicant further claims the audio representation includes only said any links included in the electronic document. Wise et al. teaches all the limitations of claims 1 and 30 as described in paragraphs 4 and 12 above. Wise does not explicitly teach the audio representation including only links of the electronic document. Wise does teach the user may select the amount of descriptive information recited (See column 7 lines 2-6). Rhie et al. teaches signaling the user in an audio manner the hyperlink selections in a web page (See column 2 lines 4-6). One of ordinary skill in the art at

the time the invention was made would have been motivated to combine the teachings of Rhie with the teachings of Wise (having the user select to hear only the links) for the desirable purpose of providing a method of accessing the hyperlinks of a web page in an inexpensive and efficient manner (See Rhie column 1 lines 47-62).

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kawamata (US 6122290, September 2000), Perrone (US 6157705, December 2000) and Uppaluru (US 5915001, June 1999) are cited as further works in the related filed of voice browsers and universal access to the internet and other electronic resources

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nora J Putt whose telephone number is 703-308-4736. The examiner can normally be reached on M-F 0700-1530.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on 703-305-4895. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5403 for regular communications and 703-308-5403 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

NJP
February 16, 2001

FAN TSANG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Workman, Nydegger & Seeley

1000 Eagle Gate Tower
60 East South Temple
Salt Lake City, Utah 84111
Phone: (801) 533-9800
Fax: (801) 328-1707

FAX TRANSMISSION COVER SHEET

Date: April 16, 2001

To: NORA J. PUTT

Fax: 4606 703-308-5403

Phone: 703-308-4736

Re: VOICE INTERFACE FOR ELECTRONIC DOCUMENTS

Sender: R. BURNS ISRAELSEN

YOU SHOULD RECEIVE 5 PAGE(S), INCLUDING THIS COVER SHEET. IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL 801-533-9800

Comments:

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THE INFORMATION CONTAINED IN THIS FACSIMILE MESSAGE IS ATTORNEY PRIVILEGED AND CONFIDENTIAL INFORMATION INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY NAMED ABOVE. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT, OR THE EMPLOYEE OR AGENT RESPONSIBLE TO DELIVER IT TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE IMMEDIATELY NOTIFY US BY TELEPHONE, AND RETURN THE ORIGINAL MESSAGE TO US AT THE ABOVE ADDRESS VIA THE U.S. POSTAL SERVICE. THANK YOU.

Proposed Interview Agenda – Do Not Enter In Record
Examiner Putt, N.
Patent Application Serial No. 09/464,989
VOICE INTERFACE FOR ELECTRONIC DOCUMENTS
Filed: December 16, 1999
Attorney Docket No. 14999.3
Attorney: R. Burns Israelsen
Today's Date: April 16, 2001

In preparation for a requested Examiner Interview, and as requested by the Examiner, Applicants propose the following agenda:

I. Attorney to present brief summary of invention.

II. Attorney to discuss rejected claims and cited art, including the following independent claims:

A. Claims 1, 17, 30, 41, 48, 51 and 56, rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,884, 262 to Wise;

III. Attorney to present proposed amended claims and discuss how proposed amended claims overcome rejections and distinguish from art of record. A copy of the a proposed amended claim 1 accompanies this agenda.

IV. Attorney to discuss any formal matters.

Any questions regarding this proposed agenda can be directed to R. Burns Israelsen at (801) 533-9800 (phone) or (801) 328-1707 (fax).

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Proposed Amended Claims – Do Not Enter In Record
Patent Application Serial No. 09/464,989
VOICE INTERFACE FOR ELECTRONIC DOCUMENTS
Filed: December 16, 1999
Attorney Docket No. 14999.3
Examiner Putt, N.
April 16, 2001

1. (Amended) In a system that includes an information service and a telephone [an input/output device] for interacting with the information service, a method of enabling a user of the telephone to access and navigate [providing an audio interface for accessing] electronic documents by presenting to the user an audio representation of a hierarchy of links of the document so as to enhance the ability of the user to navigate the electronic documents, the method comprising the acts of:

obtaining an electronic document;

parsing the electronic document to identify any text and any links included in the content of the electronic document; [and]

mapping content of the parsed electronic document by performing the acts of:

determining whether the text and links included in the content of the document represent categories, first-level links and second-level links; and

to the extent that the text and links represent categories, first-level links and second level links, creating a hierarchical data structure that associates the text and links to the categories, the first-level links and the second-level links;

generating an audio representation of at least a portion of the parsed electronic document, the audio representation being communicated to a client; and

prompting the user to select a category from the hierarchical data structure and then successively prompting the user to select any first-level links and second-level links, such that the content of the electronic document is presented audibly to the user and the can make verbal selections.

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UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
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Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.

EXAMINER

ART UNIT	PAPER NUMBER

DATE MAILED:

INTERVIEW SUMMARY

All participants (applicant, applicant's representative, PTO personnel):

(1) Burns Israelsen (3) Fan Tsang

(2) Nora Puett (4)

Date of Interview 4/17/01

Type: ☐ Telephonic ☑ Personal (copy is given to ☐ applicant ☐ applicant's representative).

Exhibit shown or demonstration conducted: ☐ Yes ☑ No If yes, brief description:

Agreement ☐ was reached. ☑ was not reached.

Claim(s) discussed: 1

Identification of prior art discussed: Wise

Description of the general natura of what was agreed to if an agreement was reached, or any other comments: Applicant pointed out that the proposed claim limitation "1st Level links" "2nd Level links" & "creating a hierarchical data structure" were not taught by reference Wise. Examiner will review the reference and take proper action upon the receive of a formal amendment.

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

1. ☒ It is not necessary for applicant to provida a separate record of the substance of the interview.

Unless the paragraph above has been checked to indicate to the contrary. A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a response to the last Office action has are ready been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW.

2. ☐ Since the Examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action. Applicant is not relieved from providing a separate record of the interview unless box 1 above is also checked.

Examiner Note: You must sign this form unless it is an attachment to another form.

FORM PTOL-413 (REV.1-96)

Manual of Patent Examining Procedure, Section 713.04 Substance of Interview must Be Made of Record

A complete written statement as to the substance of any face-to-face or telephone interview with regard to an application must be made of record in the application, whether or not an agreement with the examiner was reached at the interview.

§1.133 Interviews

* * * * *

(b) In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for response to Office action as specified in §§ 1.111,1.135. (35 U.S.C.132)

§ 1.2. Business to be transacted in writing. All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete a two-sheet carbon interleaf Interview Summary Form for each interview held after January 1, 1978 where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks in neat handwritten form using a ball point pen. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below.

The Interview Summary Form shall be given an appropriate paper number, placed in the right hand portion of the file, and listed on the "Contents" list on the file wrapper. The docket and serial register cards need not be updated to reflect interviews. In a personal interview, the duplicate copy of the Form is removed and given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephonic interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the telephonic interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Serial Number of the application
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (personal or telephonic)
- Name of participant(s)) (applicant, attorney or agent, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the claims discussed
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). (Agreements as to allowability are tentative and do not restrict further action by the examiner to the contrary.)
- The signature of the examiner who conducted the interview
- Names of other Patent and Trademark Office personnel present.

The Form also contains a statement reminding the applicant of his responsibility to record the substance of the interview.

It is desireable that the examiner orally remind the applicant of his obligation to record the substance of the interview in each case unless both applicant and examiner agree that the examiner will record same. Where the examiner agrees to record the substance of the interview, or when it is adequately recorded on the Form or in an attachment to the Form, the examiner should check a box at the bottom of the Form informing the applicant that he need not supplement the Form by submitting a separate record of the substance of the interview.

It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview:

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner. The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he feels were or might be persuasive to the examiner,
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Stimmary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete or accurate, the examiner will give the applicant one month from the date of the notifying letter or the remainder of any period for response, whichever is longer, to complete the response and thereby avoid abandonment of the application (37 CFR 1.135(c)).

Examiner to Check for Accuracy

Applicant's summary of what took place at the interview should be carefully checked to determine the accuracy of any argument or statement attributed to the examiner during the interview. If there is an inaccuracy and it bears directly on the question of patentability, it should be pointed out in the next Office letter. If the claims are allowable for other reasons of record, the examiner should send a letter setting forth his or her version of the statement attributed to him. If the record is complete and accurate, the examiner should place the indication "Interview record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

*U.S. GPO: 1997-422-310/60005

#5 LB 7-31-01

COMBINED AMENDMENT & PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) (Small Entity)	Docket No. 14999.3

In Re Application Of: **Wesemann et al.**

OIPE
JUL 23 2001
PATENT & TRADEMARK OFFICE

Serial No.	Filing Date	Examiner	Group Art Unit
09/464,989	December 16, 1999	N. Putt	2645

Invention: **VOICE INTERFACE FOR ELECTRONIC DOCUMENTS**

RECEIVED
JUL 31 2001
Technology Center 2600

TO THE ASSISTANT COMMISSIONER FOR PATENTS:

This is a combined amendment and petition under the provisions of 37 CFR 1.136(a) to extend the period for filing a response to the Office Action of **February 23, 2001** (*Date*) in the above-identified application.

The requested extension is as follows (check time period desired):

☐ One month ☒ Two months ☐ Three months ☐ Four months ☐ Five months

from: **May 23, 2001** (*Date*) until: **July 23, 2001** (*Date*)

A verified statement of small entity status as a small entity under 37 CFR 1.27:

☐ is enclosed.
☒ has already been filed in this application.

The fee for the amendment and extension of time has been calculated as shown below:

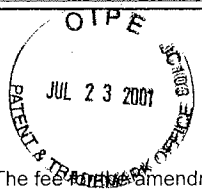
CLAIMS AS AMENDED

	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST # PREV. PAID FOR		NUMBER EXTRA CLAIMS PRESENT	RATE	ADDITIONAL FEE
TOTAL CLAIMS	28	-	60	=	0	x	$0.00
INDEP. CLAIMS	4	-	7	=	0	x	$0.00
						FEE FOR AMENDMENT	$0.00
						FEE FOR EXTENSION OF TIME	$195.00
						TOTAL FEE FOR AMENDMENT AND EXTENSION OF TIME	**$195.00**

07/30/2001 AYERGAM1 00000064 09464989
01 FC:215 195.00 OP

P28SMALL/REV03

COMBINED AMENDMENT & PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) (Small Entity)	Docket No. 14999.3



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The fee for this amendment and extension of time is to be paid as follows:

☒ A check in the amount of **$195.00** for the amendment and extension of time is enclosed.

☒ Please charge Deposit Account No. **23-3178** in the amount of **$195.00**
A duplicate copy of this sheet is enclosed.

☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No.
A duplicate copy of this sheet is enclosed.
- ☒ Any additional filing fees required under 37 C.F.R. 1.16.
- ☒ Any patent application processing fees under 37 CFR 1.17.

☒ If an additional extension of time is required, please consider this a petition therefor and charge any additional fees which may be required to Deposit Account No. **23-3178**. A duplicate copy of this sheet is enclosed.

R. Burns Israelsen

Signature

Dated: **July 23, 2001**

R. Burns Israelsen, Esq.
Registration No. 42,685
WORKMAN, NYDEGGER & SEELEY
1000 Eagle Gate Tower
60 East South Temple Street
Salt Lake City, Utah 84111
Telephone: 801-533-9800
Facsimile: 801-328-1707

cc:

I certify that this document and fee is being deposited on with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Signature of Person Mailing Correspondence

Typed or Printed Name of Person Mailing Correspondence

COMBINED AMENDMENT & PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) (Small Entity)	Docket No. 14999.3

In Re Application Of: Wesemann et al.

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Serial No.	Filing Date	Examiner	Group Art Unit
09/464,985	December 16, 1999	N. Putt	2645

Invention: VOICE INTERFACE FOR ELECTRONIC DOCUMENTS

RECEIVED JUL 31 2001 Technology Center 2600

TO THE ASSISTANT COMMISSIONER FOR PATENTS:

This is a combined amendment and petition under the provisions of 37 CFR 1.136(a) to extend the period for filing a response to the Office Action of February 23, 2001 (Date) in the above-identified application.

The requested extension is as follows (check time period desired):

☐ One month ☒ Two months ☐ Three months ☐ Four months ☐ Five months

from: May 23, 2001 (Date) until: July 23, 2001 (Date)

A verified statement of small entity status as a small entity under 37 CFR 1.27:

☐ is enclosed.
☒ has already been filed in this application.

The fee for the amendment and extension of time has been calculated as shown below:

CLAIMS AS AMENDED

	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST # PREV. PAID FOR		NUMBER EXTRA CLAIMS PRESENT	RATE	ADDITIONAL FEE
TOTAL CLAIMS	28	-	60	=	0	x	$0.00
INDEP. CLAIMS	4	-	7	=	0	x	$0.00
						FEE FOR AMENDMENT	$0.00
						FEE FOR EXTENSION OF TIME	$195.00
						TOTAL FEE FOR AMENDMENT AND EXTENSION OF TIME	**$195.00**

COMBINED AMENDMENT & PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) (Small Entity)	Docket No. 14999.3

OIPE

JUL 23 2001

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☒ Please charge Deposit Account No. **23-3178** in the amount of **$195.00**
A duplicate copy of this sheet is enclosed.

☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No.
A duplicate copy of this sheet is enclosed.
- ☒ Any additional filing fees required under 37 C.F.R. 1.16.
- ☒ Any patent application processing fees under 37 CFR 1.17.

☒ If an additional extension of time is required, please consider this a petition therefor and charge any additional fees which may be required to Deposit Account No. **23-3178** A duplicate copy of this sheet is enclosed.

R. Burns Israelsen

Signature

Dated: **July 23, 2001**

R. Burns Israelsen, Esq.
Registration No. 42,685
WORKMAN, NYDEGGER & SEELEY
1000 Eagle Gate Tower
60 East South Temple Street
Salt Lake City, Utah 84111
Telephone: 801-533-9800
Facsimile: 801-328-1707

cc:

I certify that this document and fee is being deposited on with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Signature of Person Mailing Correspondence

Typed or Printed Name of Person Mailing Correspondence

OIPE

07-26-01

GP 2645

JUL 23 2001

PATENT & TRADEMARK OFFICE

Please type a plus sign (+) inside this box → [+]

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application	09/464,989
Filing Date	December 16, 1999
First Named	Wesemann et al.
Group Art Unit	2645
Examiner Name	N. Putt
Attorney Docket Number	14999.3

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Total Number of Pages in This Submission: 1

ENCLOSURES *(check all that apply)*

- [ ] Fee Transmittal Form
  - [ ] Fee Attached
- [X] Amendment / Response
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [X] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
  - [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Assignment Papers *(for an Application)*
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
- [ ] After Allowance Communication to Group
- [ ] Appeal Communication to Board of Appeals and Interferences
- [ ] Appeal Communication to Group *(Appeal Notice, Brief, Reply Brief)*
- [ ] Proprietary Information
- [ ] Status Letter
- [X] Other Enclosure(s) *(please identify below)*:

Combined Amendment & Petition for Extension of Time under 37 CFR 1.136(6)a
Postcard
Certificate of Express Mailing
Credit Card Payment Form

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	WORKMAN, NYDEGGER & SEELEY R. Burns Israelsen
Signature	R. Burns Israelsen
Date	July 23, 2001

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on this date: July 23, 2001

Typed or printed name	R. Burns Israelsen		
Signature	R. Burns Israelsen	Date	July 23, 2001

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be send to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

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Express Mailing No. EL 813 865 285 US

PATENT APPLICATION
Docket No: 14999.3

OIPE
JUL 23 2001
PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	Wesemann et al.	)
Serial No.:	09/464,989	) Art Unit 2645
Confirmation No.:		)
Filed:	December 16, 1999	)
For:	VOICE INTERFACE FOR ELECTRONIC DOCUMENTS	)
Examiner:	Putt, N.	)

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JUL 31 2001
Technology Center 2600

AMENDMENT "A"

Assistant Commissioner for Patents
Washington, D. C. 20231

Sir:

Responsive to the Office Action of February 23, 2001, Applicants respectfully request entry of the following amendments and reconsideration of the pending claims in view of the amendments, the matters discussed at the interview, the remarks herein, and an accompanying Petition for Extension of Time that extends the period of response by two months.

IN THE SPECIFICATION

Please replace the paragraph beginning at page 20, line 22 with the following rewritten paragraph:

In contrast to Figure 5, Figure 11 is a flow chart illustrating the operation of a preferred embodiment of the present invention that provides only the default mapping of separating text and links. In step 1110, a client selects the option of starting with a list of favorite Internet sites. Text to Speech 420 prompts the user to select one of the sites listed, step 1120. As before, in step 1130 the document is retrieved using the protocols that are appropriate given the document's location. Again, as before, the content is parsed in step 1140 to identify any title, any links, any link names, and any text included in the document.

A1

IN THE CLAIMS

Please cancel claims 3, 17-40, 42, 43, 48-50, 52 and 57 without prejudice.

Please amend claims 1, 4, 6, 16, 41, 45-47, 51, 53-56 and 58-60 as follows:

---

1. (Amended) In a system that includes an information service and a telephone for interacting with the information service, a method of enabling a user of the telephone to access and navigate electronic documents by presenting to the user an audio representation of a hierarchy of links of the document so as to enhance the ability of the user to navigate the electronic documents, the method comprising the acts of:

A2

obtaining an electronic document;

parsing the electronic document to identify any text and any links included in the content of the electronic document;

mapping content of the parsed electronic document by performing the acts of:

determining whether the text and links included in the content of the document represent categories, first-level links and second-level links in a hierarchical relationship one with another; and

to the extent that the text and links represent categories, first-level links and second level links, creating a hierarchical data structure that associates the text and links to the categories, the first-level links and the second-level links;

generating an audio representation of at least a portion of the parsed electronic document, the audio representation being communicated to a client; and

prompting the user to select a category from the hierarchical data structure and then successively prompting the user to select any first-level links and second-level links, such that the content of the electronic document is presented audibly to the user and the user can make verbal selections.

3. (Amended) A method as recited in claim 1 further comprising the acts of generating an audio representation of the one or more categories.

5. (Amended) A method as recited in claim 1 wherein the act of mapping includes creating a hierarchy of said any text and said any links.

15. (Amended) A method as recited in claim 1 further comprising the act of providing the user with a visual representation of the electronic document simultaneously with the act of generating the audio representation.

16yr. (Amended) In an information system that has access, through the Internet, to electronic documents, wherein the electronic documents are written in a markup language having B elements that ~~only are~~ are only capable of describing the visual appearance of the electronic documents, and the information system is connected to a client by a telephony infrastructure, a method for providing the user with telephone access to the electronic documents, the method comprising the acts of:

obtaining an electronic document through the Internet;

parsing the electronic document to identify any text and any links included in the content of the electronic document; A6

mapping content of the parsed electronic document by performing the acts of:

determining whether the text and links included in the content of the document represent categories, first-level links and second-level links in a hierarchical relationship one with another; and

to the extent that the text and links represent categories, first-level links and second level links, creating a hierarchical data structure that associates the text and links to the categories, the first-level links and the second-level links;

prompting the client to traverse the hierarchical data structure, including automatically selecting any category and any associated link when exactly one category and exactly one associated link is present;

receiving input from the client to traverse the hierarchical data structure, wherein the input includes instructions for selecting an electronic document with text; and

A6

generating an audio representation of the parsed electronic document, including a count of any links and any text present in the electronic document, the audio representation being communicated to the client.

17 16
~~44.~~ (Amended) A method as recited in claim ~~41~~, wherein the instruction is spoken into the telephone.

A7

18 17
~~45.~~ (Amended) A method as recited in claim ~~44~~, wherein the input further includes at least one of an instruction to email, fax, or voice mail at least a portion of the electronic document to a third party selected from a contact list of the client.

19 17
~~46.~~ (Amended) A method as recited in claim ~~44~~, wherein the audio representation includes information representing at least one link and wherein the input includes an instruction to select the at least one link, the method further comprising the act of following the at least one link.

20 16
~~47.~~ (Amended) A method as recited in claim ~~41~~ further comprising the act of providing the user with a visual representation of the electronic document simultaneously with the act of generating the audio representation.

21. (Amended) A system providing access, through an audio interface, to electronic documents so as to enable a user of the audio interface to access and navigate the electronic documents by presenting to the user a hierarchy of links of the document, the ~~document the~~ system comprising:

processor means for obtaining an electronic document;

processor means for parsing the electronic document to identify any text and any links included in the content of the electronic document;

processor means for mapping content of the parsed electronic document by performing the acts of:

determining whether the text and links included in the content of the document represent categories, first-level links and second-level links in a hierarchical relationship one with another; and

to the extent that the text and links represent categories, first-level links and second level links, creating a hierarchical data structure that associates the text and links to the categories, the first-level links and the second-level links;

processor means for generating an audio representation of at least a portion of the parsed electronic document, the audio representation being communicated to a client; and

processor means for prompting the user to select a category from the hierarchical data structure and then successively prompting the user to select any first-level links and second-level links, such that the content of the electronic document is presented audibly to the user and the user can make verbal selections.

22 53. (Amended) A system as recited in claim 21 further comprising processor means for receiving spoken input from the user.

23 54. (Amended) A system as recited in claim 22 wherein the input comprises at least one of an instruction to email, fax, or voice mail at least a portion of the electronic document to a third party selected from a contact list of the client.

A9

24 55. (Amended) A system as recited in claim 22 wherein the audio representation includes information representing at least one link and wherein the input includes an instruction to select the at least one link, the system further comprising processor means for following the at least one link.

25

56. (Amended) A computer program product for providing access, through an audio interface, to electronic documents so as to enable a user of the audio interface to access and navigate the electronic documents by presenting to the user a hierarchy of links of the document, the ~~document the~~ computer program product comprising:

a computer-readable medium carrying computer-executable instructions for implementing the method, the computer-executable instructions comprising:

program code means for obtaining an electronic document;

program code means for parsing the electronic document to identify any text and any links included in the content of the electronic document;

program code means for mapping content of the parsed electronic document by performing the acts of:

determining whether the text and links included in the content of the document represent categories, first-level links and second-level links in a hierarchical relationship one with another; and

to the extent that the text and links represent categories, first-level links and second level links, creating a hierarchical data structure that associates the text and links to the categories, the first-level links and the second-level links;

program code means for generating an audio representation of at least a portion of the parsed electronic document, the audio representation being communicated to a client; and

program code means for prompting the user to select a category from the hierarchical data structure and then successively prompting the user to select any

A9 first-level links and second-level links, such that the content of the electronic B document is presented audibly to the user and the user can make verbal selections.

24 25
58. (Amended) A computer-readable medium as recited in claim 56 wherein the computer-executable instructions further comprises program code means for receiving spoken input from the user.

A10

21 24
59. (Amended) A computer-readable medium as recited in claim 58 wherein the input comprises at least one of an instruction to email, fax, or voice mail at least a portion of the electronic document to a third party selected from a contact list of the client.

28 24
60. (Amended) A computer-readable medium as recited in claim 58 wherein the audio representation includes information representing at least one link and wherein the input includes an instruction to select the at least one link, wherein the computer-executable instructions further comprise program code means for following the at least one link.

REMARKS

Applicants express appreciation to the Examiner for the Interview of April 17, 2001 conducted with Applicants' attorneys. The Office Action of February 23, 2001 rejected claims 1-60. By this paper, claims 3, 17-40, 42, 43, 48-50, 52 and 57 have been canceled. Accordingly, claims 1, 2, 4-16, 41, 44-47, 51, 53-56 and 58-60 are pending. Applicants respectfully request favorable reconsideration of the pending claims in view of the amendments made herein and the matters discussed at the interview.

The Office Action rejected claims 1-7, 9-23, 25-33, 35-44, 46-53, 55-58 and 60 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,884,262 to Wise. Claims 8, 11, 24, 34, 36, 45, 54 and 59 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wise in view of U.S. Patent No. 5,953,392 to Rhie.

At the Interview of April 17, 2001, Applicants' attorney discussed proposed amendments to claim 1. Claim 1 as amended now recites:

> mapping content of the parsed electronic document by performing the acts of:
>
> determining whether the text and links included in the content of the document represent categories, first-level links and second-level links in a hierarchical relationship one with another; and
>
> to the extent that the text and links represent categories, first-level links and second level links, creating a hierarchical data structure that associates the text and links to the categories, the first-level links and the second-level links;

As discussed at the interview, neither Wise nor Rhie teach or suggest mapping content of a parsed electronic document in the foregoing manner. In particular, Wise and Rhie fail to teach

or suggest "determining whether the text and links included in the content of the document represent categories, first-level links and second-level links in a hierarchical relationship one with another" and further fail to teach or suggest "creating a hierarchical data structure that associates the text and links to the categories, the first-level links and the second-level links."

Mapping the content of a parsed electronic document as recited in claim 1 as amended can provide certain benefits not understood in the prior art, including enhancing the ability of the user to navigate electronic documents. Moreover, claim 1 as amended recites:

> prompting the user to select a category from the hierarchical data structure and then successively prompting the user to select any first-level links and second-level links, such that the content of the electronic document is presented audibly to the user and the can make verbal selections

As further discussed at the Interview, none of the cited references prompt a user to select from a hierarchical structure in the foregoing manner. Applicants respectfully submit that claim 1 as amended distinguishes from the cited references for the foregoing reasons.

The other independent claims 41, 51 and 56 include a limitation substantially similar to the act of "mapping content of the parsed electronic document . . ." discussed above in reference to claim 1. In addition, claims 51 and 56 include a limitation substantially similar to the act of "prompting the user to select a category from the hierarchical data structure . . ." discussed above in reference to claim 1. Applicants respectfully submit that claims 41, 51 and 56 also distinguish from the cited references for at least these reasons.

The other pending claims are dependent claims that depend from the independent claims discussed above and are patentable at least on the basis of their dependency from a patentable base claim.

Applicants also point out that several of the claims have been amended to promote clarity, to provide terminology that is consistent with that of the base claims, and for other reasons that are not related to either responding to a rejection of the claims or distinguishing from cited art.

Attached hereto is a marked-up version of the changes made to the previous version of the specification and claims by this amendment. The attached pages are captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

For the foregoing reasons, Applicants submit that the pending claims are in condition for allowance and courteously request favorable action. If there are any outstanding issues that could be resolved by telephone, the Examiner is invited to contact the undersigned attorney.

Dated this 23rd day of July, 2001.

Respectfully submitted,

R. BURNS ISRAELSEN
Attorney for Applicant
Registration No. 42,685

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

At page 21, line 2, "in" has been replaced with --is--.

IN THE CLAIMS

Claims 3, 17-40, 42, 43, 48-50, 52 and 57 have been canceled.

Claims 1, 4, 6, 16, 41, 45-47, 51, 53-56 and 58-60 have been amended as follows:

1. (Amended) In a system that includes an information service and a telephone [an input/output device] for interacting with the information service, a method of enabling a user of the telephone to access and navigate [providing an audio interface for accessing] electronic documents by presenting to the user an audio representation of a hierarchy of links of the document so as to enhance the ability of the user to navigate the electronic documents, the method comprising the acts of:

obtaining an electronic document;

parsing the electronic document to identify any text and any links included in the content of the electronic document; [and]

mapping content of the parsed electronic document by performing the acts of:

determining whether the text and links included in the content of the document represent categories, first-level links and second-level links in a hierarchical relationship one with another; and

to the extent that the text and links represent categories, first-level links and second level links, creating a hierarchical data structure that associates the text and links to the categories, the first-level links and the second-level links;

generating an audio representation of at least a portion of the parsed electronic document, the audio representation being communicated to a client; and

prompting the user to select a category from the hierarchical data structure and then successively prompting the user to select any first-level links and second-level links, such that the content of the electronic document is presented audibly to the user and the can make verbal selections.

4. (Amended) A method as recited in claim 1 [3] further comprising the acts of generating an audio representation of the one or more categories.

6. (Amended) A method as recited in claim 1 [3] wherein the act of mapping includes creating a hierarchy of said any text and said any links.

16. (Amended) A method as recited in claim 3 further comprising the act of providing the user with a visual representation of the electronic document simultaneously with the act of generating [communicating] the audio representation.

41. (Amended) In an information system that has access, through the Internet, to [one or more] electronic documents, wherein the [one or more] electronic documents are written in a markup language having elements that only are capable of describing the visual appearance of the [one or more] electronic documents, and the information system is connected to a client by a telephony infrastructure, a method for providing the user with telephone access to the [one more] electronic documents, the method comprising the acts of:

obtaining an [one of the one or more] electronic document through the Internet [documents];

parsing the [one] electronic document to identify any text and any links included in the content of the [one] electronic document; [and]

mapping content of the parsed electronic document by performing the acts of:

determining whether the text and links included in the content of the document represent categories, first-level links and second-level links in a hierarchical relationship one with another; and

to the extent that the text and links represent categories, first-level links and second level links, creating a hierarchical data structure that associates the text and links to the categories, the first-level links and the second-level links;

prompting the client to traverse the hierarchical data structure, including automatically selecting any category and any associated link when exactly one category and exactly one associated link is present;

receiving input from the client to traverse the hierarchical data structure, wherein the input includes instructions for selecting an electronic document with text; and

generating an audio representation of [at least a portion of] the parsed [one] electronic document, including a count of any links and any text present in the electronic document, the audio representation being communicated to the client.

44. (Amended) A method as recited in claim 41 [further comprising the act of receiving an instruction from the client], wherein the instruction is spoken into the telephone.

45. (Amended) A method as recited in claim 44, wherein the input further includes [instruction received from the client is] at least one of an instruction to email, fax, or voice mail

at least a portion of the electronic document to a third party selected from a [the client's] contact list of the client.

46. (Amended) A method as recited in claim 44, wherein the audio representation includes information representing at least one link and wherein the input includes an instruction [from the client is] to select the at least one link, the method further comprising the act of following the at least one link.

47. (Amended) A method as recited in claim 41 further comprising the act of providing the user with a visual representation of the electronic document simultaneously with the act of generating [communicating] the audio representation.

51. (Amended) A system providing access, through an audio interface, to electronic documents[,] so as to enable a user of the audio interface to access and navigate the electronic documents by presenting to the user a hierarchy of links of the document [wherein the electronic documents are written in a markup language having elements that only are capable of describing the visual appearance of the electronic documents,] the system comprising:

processor means for obtaining an electronic document;

processor means for parsing the electronic document to identify any text and any links included in the content of the electronic document; [and]

processor means for mapping content of the parsed electronic document by performing the acts of:

determining whether the text and links included in the content of the document represent categories, first-level links and second-level links in a hierarchical relationship one with another; and

to the extent that the text and links represent categories, first-level links and second level links, creating a hierarchical data structure that associates the text and links to the categories, the first-level links and the second-level links;

processor means for generating an audio representation of at least a portion of the parsed electronic document, the audio representation being communicated to a client; and

processor means for prompting the user to select a category from the hierarchical data structure and then successively prompting the user to select any first-level links and second-level links, such that the content of the electronic document is presented audibly to the user and the can make verbal selections.

53. (Amended) A system as recited in claim 51 further comprising processor means for receiving [a] spoken input [instruction] from the user [client].

54. (Amended) A system as recited in claim 53 wherein the input comprises [instruction received from the client is] at least one of an instruction to email, fax, or voice mail at least a portion of the electronic document to a third party selected from a [the client's] contact list of the client.

55. (Amended) A system as recited in claim 53 wherein the audio representation includes information representing at least one link and wherein the input includes an instruction [from the client is] to select the at least one link, the system further comprising processor means for following the at least one link.

56. (Amended) A computer program product for providing access, through an audio interface, to electronic documents[,] so as to enable a user of the audio interface to access and navigate the electronic documents by presenting to the user a hierarchy of links of the document [wherein the electronic documents are written in a markup language having elements that only are capable of describing the visual appearance of the electronic documents,] the computer program product comprising:

a computer-readable medium carrying computer-executable instructions for implementing the method, the computer-executable instructions comprising:

program code means for obtaining an electronic document;

program code means for parsing the electronic document to identify any text and any links included in the content of the electronic document; [and]

program code means for mapping content of the parsed electronic document by performing the acts of:

determining whether the text and links included in the content of the document represent categories, first-level links and second-level links in a hierarchical relationship one with another; and

to the extent that the text and links represent categories, first-level links and second level links, creating a hierarchical data structure that associates the text and links to the categories, the first-level links and the second-level links;

program code means for generating an audio representation of at least a portion of the parsed electronic document, the audio representation being communicated to a client; and

program code means for prompting the user to select a category from the hierarchical data structure and then successively prompting the user to select any first-level links and second-level links, such that the content of the electronic document is presented audibly to the user and the can make verbal selections.

58. (Amended) A computer-readable medium as recited in claim 56 wherein the computer-executable instructions further comprises program code means for receiving [a] spoken input [instruction] from the user [client].

59. (Amended) A computer-readable medium as recited in claim 58 wherein the input comprises [instruction received from the client is] at least one of an instruction to email, fax, or voice mail at least a portion of the electronic document to a third party selected from a [the client's] contact list of the client.

60. (Amended) A computer-readable medium as recited in claim 58 wherein the audio representation includes information representing at least one link and wherein the input includes an instruction [from the client is] to select the at least one link, wherein the computer-executable instructions further comprise [comprises] program code means for following the at least one link.

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

022913 WM02/0928
WORKMAN NYDEGGER & SEELEY
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY UT 84111

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT		DATE MAILED
09/464,989	12/16/99	028	ESCALANTE, O	2645	09/28/01

First Named Applicant	WESEMANN,	35 USC 154(b) term ext. =	0 Days.

TITLE OF INVENTION: VOICE INTERFACE FOR ELECTRONIC DOCUMENTS

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
2 14999.3	379-088.010	M74	UTILITY	NO	$1240.00	12/28/01

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.

HOW TO RESPOND TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or

B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

A. Pay FEE DUE shown above, or

B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PATENT AND TRADEMARK OFFICE COPY

Notice of Allowability	Application No. 09/464,989	Applicant(s) WESEMANN ET AL.	
	Examiner Ovidio Escalante	Art Unit 2645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *July 23, 2001*.
2. ☒ The allowed claim(s) is/are *1,2,4-16,41,44-47,51,53-56,58-60, (renumbered 1-28)*.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
   (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

8. ☐ CORRECTED DRAWINGS must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No. ____.
   (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
   (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1☒ Notice of References Cited (PTO-892)
2☐ Notice of Informal Patent Application (PTO-152)
3☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
4☐ Interview Summary (PTO-413), Paper No.____ .
5☐ Information Disclosure Statements (PTO-1449), Paper No. ____.
6☒ Examiner's Amendment/Comment
7☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
8☒ Examiner's Statement of Reasons for Allowance
9☐ Other .

FAN TSANG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

DETAILED ACTION

1. This action is in response to applicant's amendment filed on July 23, 2001. **Claims 1,2,4-16,41,44-47,51,53-56,58-60** are now pending in the present application.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with R. Burns Israelsen on September 21, 2001.

The application has been amended as follows:

In claim 1, line 21, before "can" insert --user--

In claim 11, line 2, delete "any"

In claim 12, line 2, delete "any" (both occurrences)

In claim 14, line 2 change "only are" to --are only--

In claim 41, line 3, change "only are" to --are only--

In claim 51, lines 3, change "document the" to --document, the--

In claim 51, line 21, before "can" insert --user--

In claim 56, line 4, change "document the" to --document, the--

In claim 56, line 25, before "can" insert --user--

Drawings

3. The Drawings submitted on December 16, 1999 have been approved by the Draftsman.

REASONS FOR ALLOWANCE

4. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to disclose or render obvious, alone or in combination, claims 1,2,4-16,41,44-47,51,53-56,58-60, (renumbered 1-28). The subject claims are directed to a system, method and computer program product for enabling a user to access and navigate electronic documents via a telephone.

Specifically regarding claims 1,41,51 and 56, the prior art of record does not teach or suggest the feature of determining whether the text and links which was parsed represent categories, first-level links and second-level links in a hierarchical relationship with each other and creating a hierarchical data structure that associates the text and links to the categories, the first-level links and the second-level links; and prompting the user to select a category from the hierarchical data structure.

The previously applied prior art of record Wise et al. US Patent 5,884,262 teaches a system and method for accessing electronic documents via a telephone. The system of Wise parses the electronic documents to determine the content of the document which includes determining the headers, labels, text graphics, audio information, comments and other types of content. Wise, however, fails to teach of creating a hierarchical relationship of the content of the electronic document with each other.

The prior art of record Rhie et al. US Patent 5,953,392 teaches a system for accessing and browsing the Internet through the use of a telephone. The system performs text to speech

translations of the text on the page. Rhie, however fails to teach or suggest of determining whether the text and links represent categories, first-level links and second-level links in a hierarchical relationship with each other and creating a hierarchical data structure that associated the text and links to the categories, the first-level links and the second-level links; and prompting the user to select a category from the hierarchical data structure.

The remaining prior art of record fails to teach the above feature or provide a motivation to add such a feature.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ball et al. US Patent 6,240,391 B1 teaches of a method for assembling and presenting a structured electronic message. Ball however fails to teach of creating a hierarchical relationship of the content of the electronic message.

Saylor et al. US Patent 6,263,051 B1 teaches of a method of providing a user an electronic message which will allow a user to navigate though a series of categories in hierarchical relationship with each other. Saylor however fails to teach of parsing a document to determine the content of the electronic page and creating a hierarchical relationship based on the parsing.

Ladd et al. US Patent 6,269,336 B1 teaches of a markup language to provide interactive service. Ladd however, fails to teach or suggest of determining whether the text and links represent categories, first-level links and second-level links in a hierarchical relationship with each other and creating a hierarchical data structure that associated the text and links to the categories, the first-level links and the second-level links; and prompting the user to select a category from the hierarchical data structure.

6. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Or:

(703) 872-9314, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA, Sixth Floor (Receptionist).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ovidio Escalante whose telephone number is (703) 308-6262. The examiner can normally be reached on Monday to Friday from 6:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang, can be reached on (703) 305-4895. The fax phone number for this Group is (703) 872-9314.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [fan.tsang@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ovidio Escalante
Examiner
Group 2645
September 21, 2001

FAN TSANG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Notice of References Cited	Application/Control No. 09/464,989	Applicant(s)/Patent Under Reexamination WESEMANN ET AL.	
	Examiner Ovidio Escalante	Art Unit 2645	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification	
*	A	US-6,240,391 B1	05-2001	Ball et al.	704	270
*	B	US-6,263,051 B1	07-2001	Saylor et al.	379	88.17
*	C	US-6,269,336 B1	07-2001	Ladd et al.	704	270
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification	
	N						
	O						
	P						
	Q						
	R						
	S						
	T						

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

HM 12-28-01

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PATENT APPLICATION
Docket No. 14999.3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Darren L. Wesemann, et al.	)
Serial No.:	09/464,989	) Art Unit 2645
Filed:	December 16, 1999	)
Confirmation No.:	Unassigned	)
For:	VOICE INTERFACE FOR ELECTRONIC DOCUMENTS	)
Examiner:	Ovidio Escalante	)
Issue Batch No.:	M74	)

TRANSMITTAL OF ISSUE FEE PAYMENT,
AND
COMMENTS ON EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE

Box: ISSUE FEE
Assistant Commissioner of Patents
Washington, D.C. 20231

HM

Sir:

The enclosed Notice of Allowance and Issue Fee due is submitted herewith pursuant to 37 C.F.R. § 1.67 and M.P.E.P 603.01 for filing in the matter of the United States patent application as hereinabove identified. Enclosed is PTO Form 2038 for $670.00 for payment of the issue fee.

The Commissioner is hereby authorized to credit any overpayment or charge any additional fees to Deposit Account No. 23-3178 of the undersigned. Triplicate copies of this sheet are enclosed.

Please address all future correspondence in connection with the above-identified patent application to the attention of the undersigned.

Comments on Statement of Reasons for Allowance

Applicants respectfully submit that the claimed invention as set forth in each of the independent claims and the dependent claims must be read as a whole, and not as a single feature or subcombination of features which represent less than the entirety of the claimed invention as a whole. While a particular feature or subcombination of features referred to by the Examiner in the Statement of Reasons for Allowance may represent a basis for distinguishing the claimed invention over the prior art, Applicants further submit that this may not necessarily be the *sole* ground for distinguishing the claimed invention over the prior art of record. Accordingly, the Examiner's statement should, in Applicants' view, not be read as constituting or meaning that the invention can or should be reduced to a single "feature" of the invention or to a subcombination of features that is less than the entire invention claimed as a whole, nor that the single feature referenced by the Examiner or subcombination of features referenced by the Examiner in the Statement of Reasons for Allowance is the only or sole grounds for distinguishing the invention over the prior art of record.

Dated this 21 day of December, 2001.

Respectfully submitted,

R. Burns Israelsen

R. BURNS ISRAELSEN
Attorney for Applicant
Registration No. 42,685

022913

PATENT TRADEMARK OFFICE

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PART B—ISSUE FEE TRANSMITTAL

Complete and mail this form, together with applicable fees, to: **Box ISSUE FEE**
Assistant Commissioner for Patents
Washington, D.C. 20231

MAILING INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE. Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Issue Fee Receipt, the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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022913 WM02/0928
WORKMAN NYDEGGER & SEELEY
1000 EAGLE GATE TOWER
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SALT LAKE CITY UT 84111

Note: The certificate of mailing below can only be used for domestic mailings of the Issue Fee Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing.

Certificate of Mailing

I hereby certify that this Issue Fee Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above on the date indicated below.

Dolly Burnett (Depositor's name)
Dolly Burnett (Signature)
Dec. 21, 2001 (Date)

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT		DATE MAILED
09/464,989	12/16/99	028	ESCALANTE, O	2645	09/28/01
First Named Applicant	WESEMANN,		35 USC 154(b) term ext. =	0 Days.	

TITLE OF INVENTION: VOICE INTERFACE FOR ELECTRONIC DOCUMENTS

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
2 14999.3	379-088.010	M74	UTILITY	NO	$1240.00	12/28/01

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). Use of PTO form(s) and Customer Number are recommended, but not required.
   - ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
   - ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47) attached.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
   1 Workman, Nydegger &
   2 Seeley
   3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)
   PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the PTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.
   (A) NAME OF ASSIGNEE: Talk2 Technology, Inc.
   (B) RESIDENCE: (CITY & STATE OR COUNTRY): Salt Lake City, Utah
   Please check the appropriate assignee category indicated below (will not be printed on the patent)
   ☐ individual ☒ corporation or other private group entity ☐ government

4a. The following fees are enclosed (make check payable to Commissioner of Patents and Trademarks):
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(Authorized Signature) R Bruce Stucki (Date) 12/21/01

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APPROVED BY DRAFTSMAN | O.G. FIG. | CLASS 379 | SUBCLASS 88.17

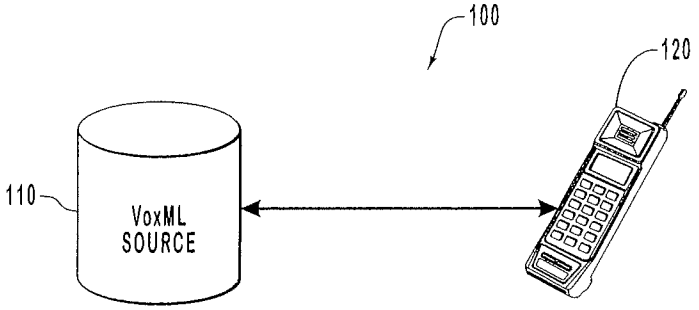

FIG. 1
(PRIOR ART)

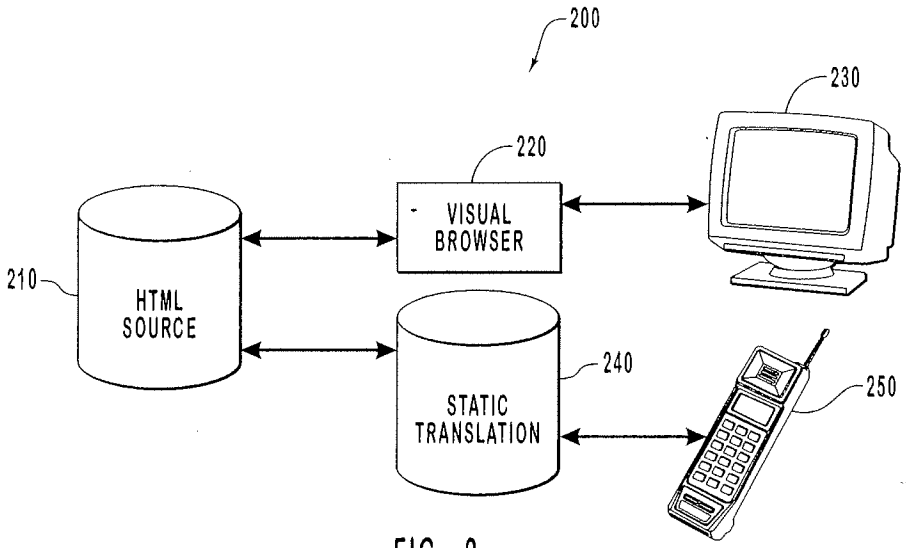

FIG. 2
(PRIOR ART)

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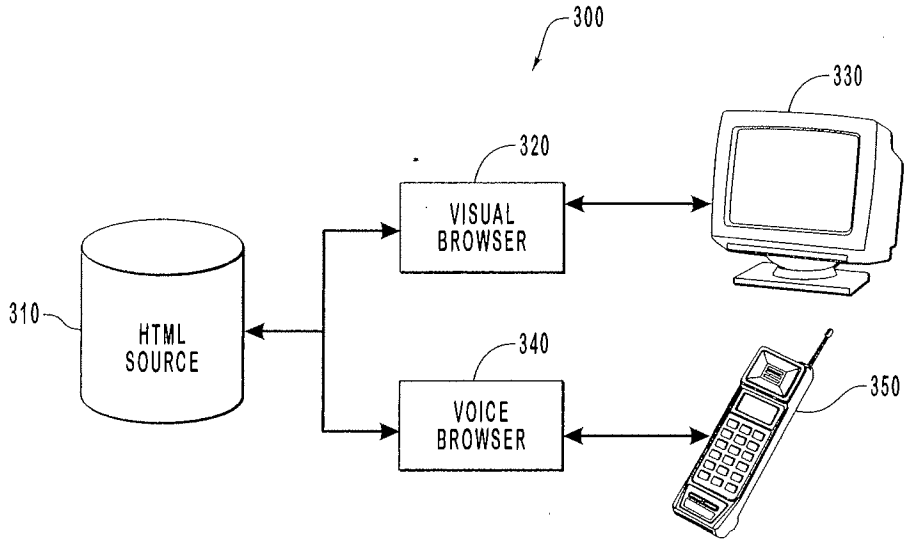

FIG. 3

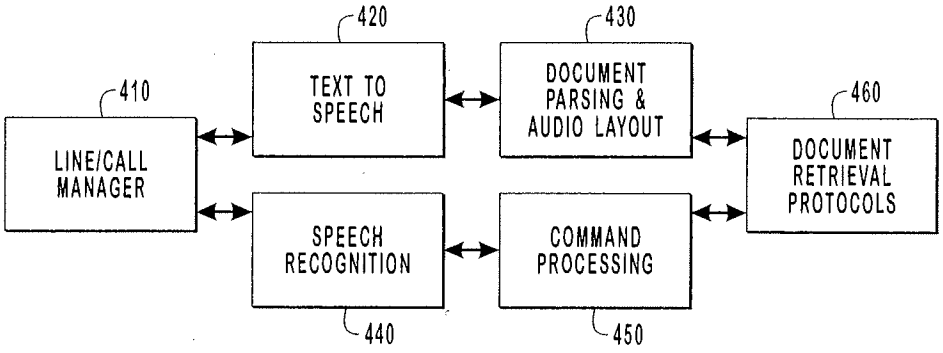

FIG. 4

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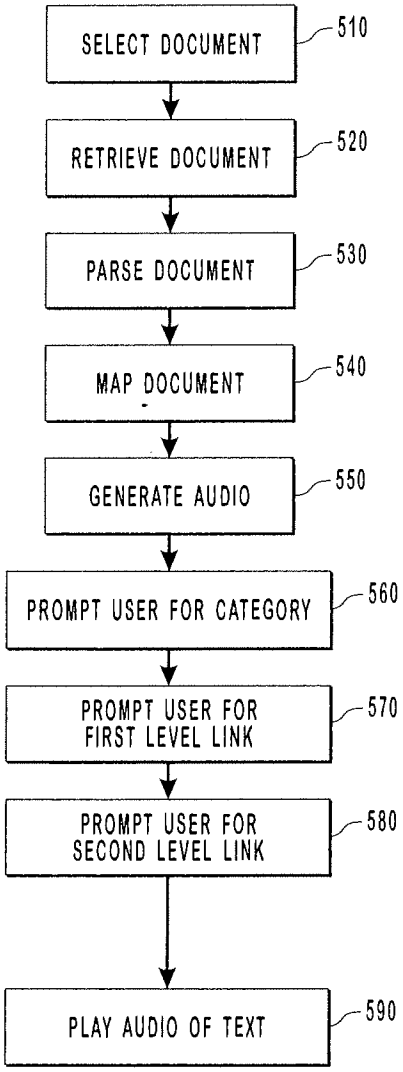

FIG. 5

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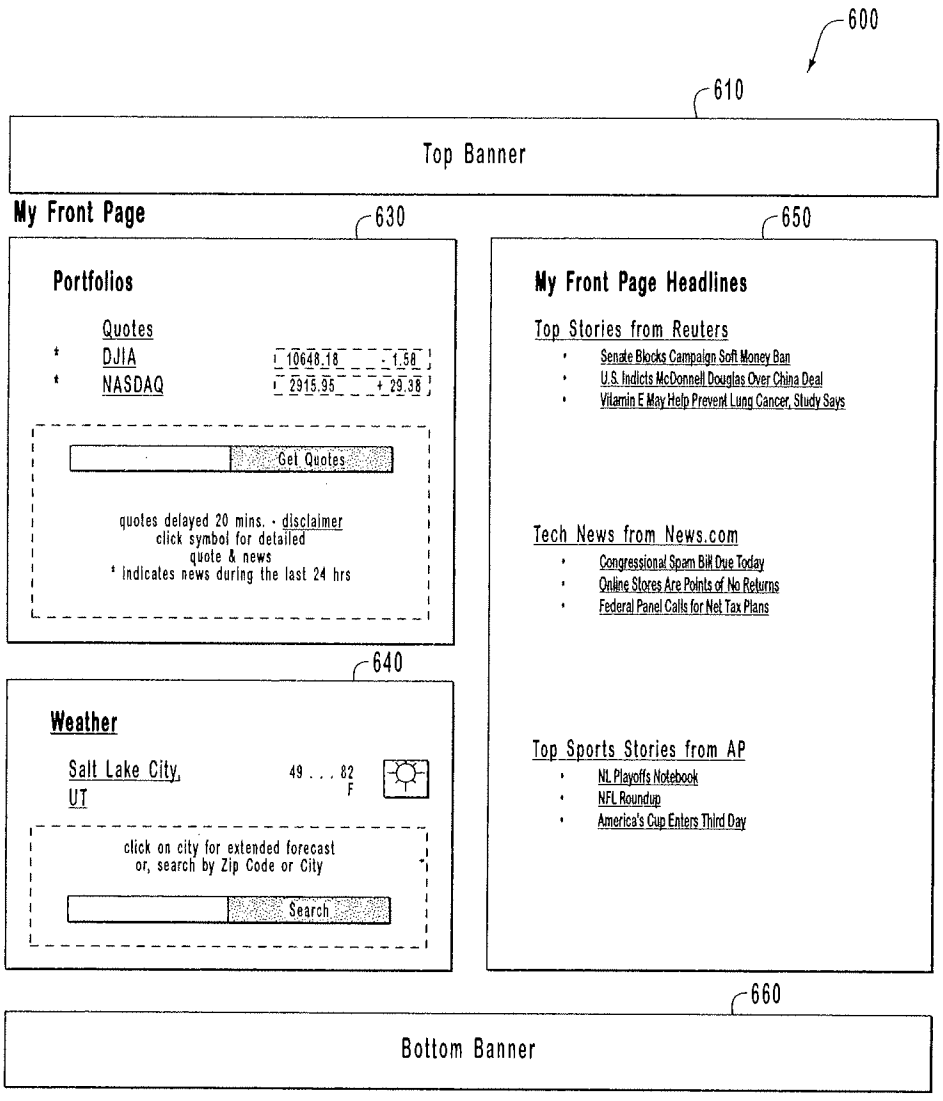

FIG. 6

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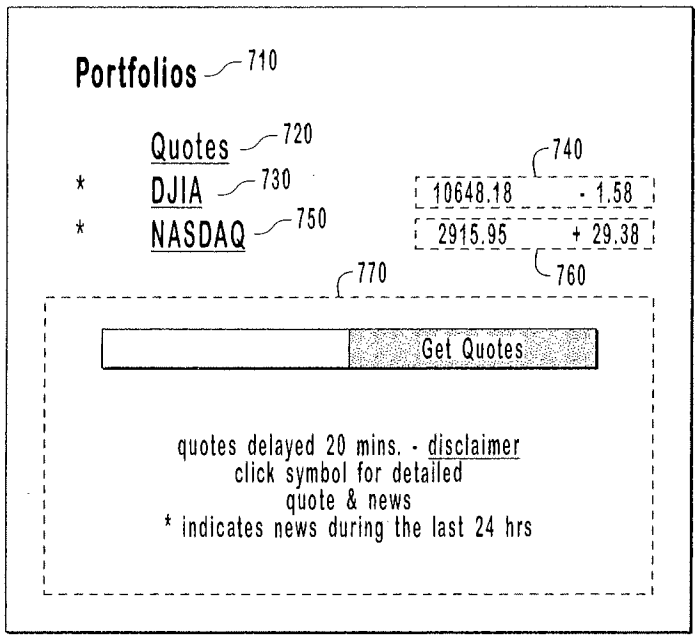

FIG. 7

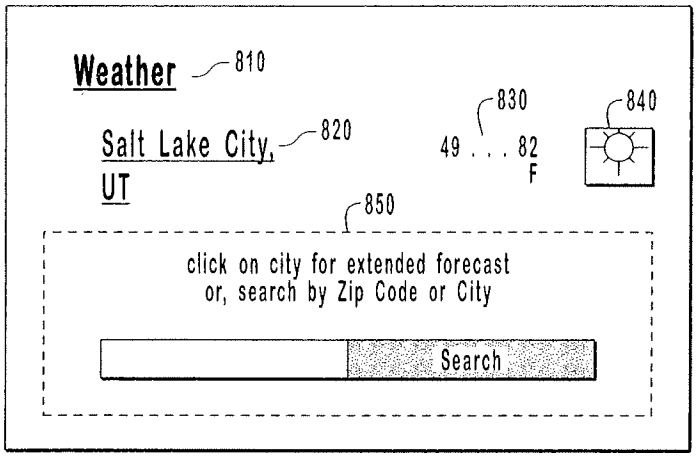

FIG. 8

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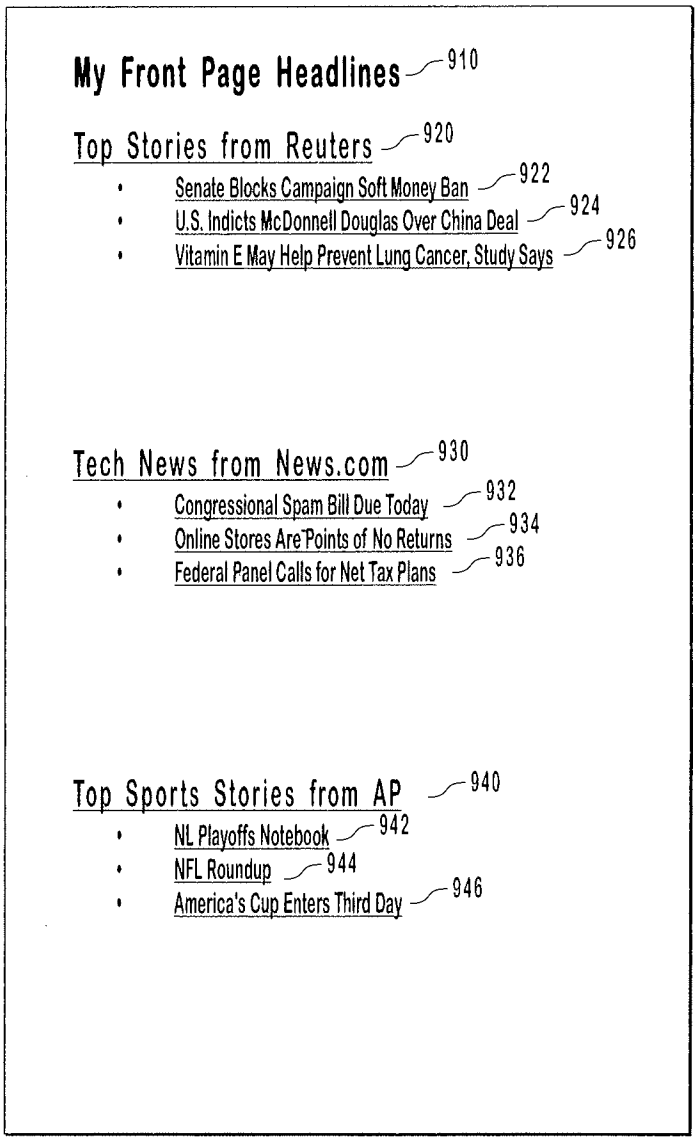

FIG. 9

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Categories — 1010
- Portfolios — 710
- Weather — 810
- My Front Page Headlines — 910

First-Level Links — 1020
- Quotes — 720
- Salt Lake City, UT — 820
- Top Stories from Reuters — 920
- Tech News from News.com — 930
- Top Sport Stories from Reuters — 940

Second-Level Links — 1030
- DIJA — 730
- NASDAQ — 750
- Story Headlines — 922-926, 932-936, 942-946

Text of Stories — 1040

FIG. 10

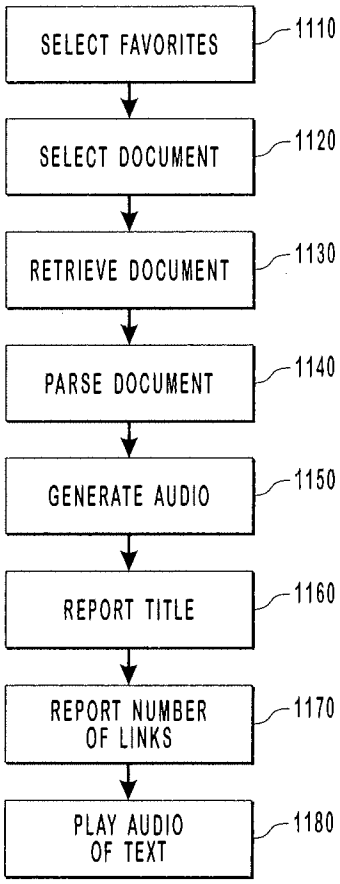

FIG. 11

APPROVED BY DRAFTSMAN | O.G. FIG. | CLASS 379 | SUBCLASS 88.17

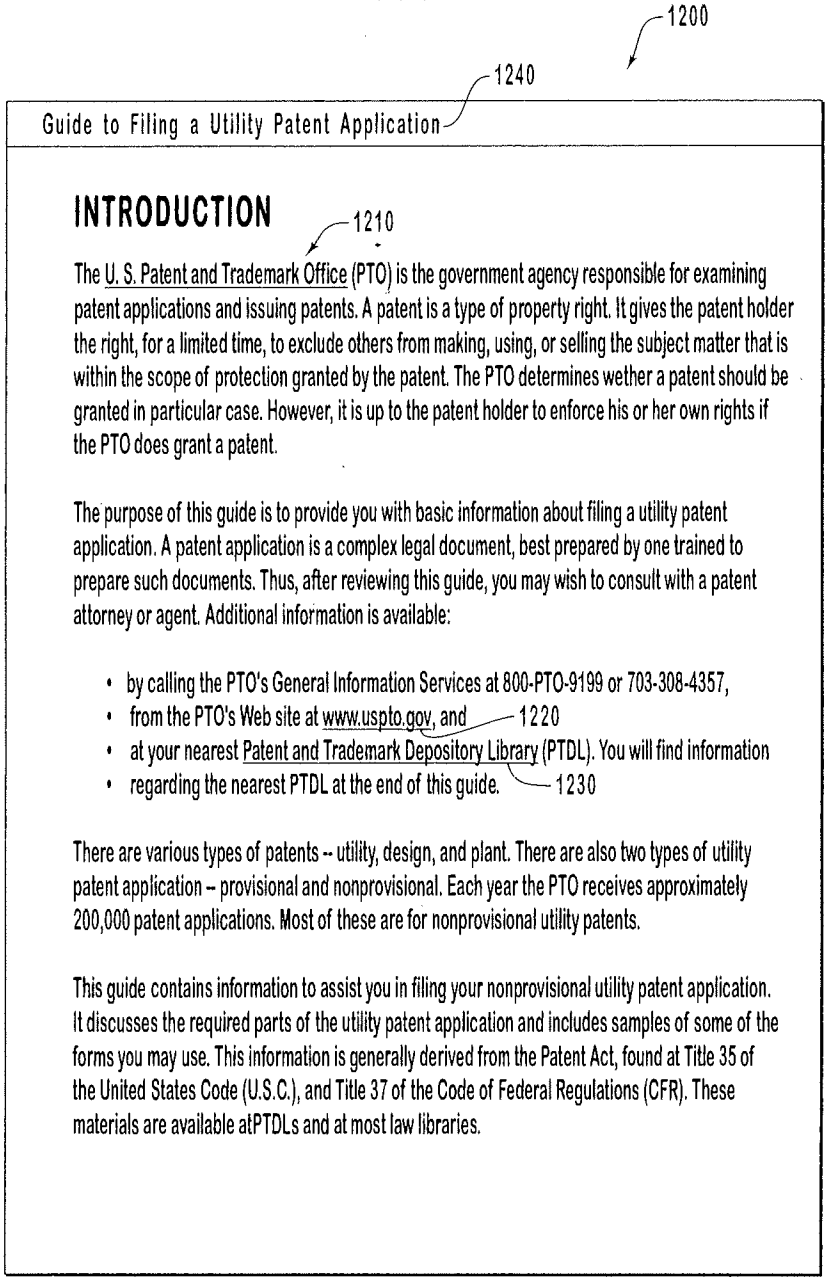

FIG. 12

	Type	Hits	Search Text	DBs	Time Stamp
1	IS&R	90	("379/258").CCLS.	USPAT	2000/09/05 11:13
2	IS&R	698	("379/88.01").CCLS.	USPAT; JPO; Derwent; IBM TDB	2001/02/14 13:45
3	IS&R	105	("379/88.11").CCLS.	USPAT; JPO; Derwent; IBM TDB	2001/02/14 14:31
4	IS&R	178	("379/88.13").CCLS.	USPAT; JPO; Derwent; IBM TDB	2001/02/14 14:46
5	IS&R	52	("379/88.14").CCLS.	USPAT; JPO; Derwent; IBM TDB	2001/02/14 14:50
6	IS&R	76	("379/88.17").CCLS.	USPAT; JPO; Derwent; IBM TDB	2001/02/14 15:00
7	IS&R	185	("379/88.22").CCLS.	USPAT; JPO; Derwent; IBM TDB	2001/02/14 15:07
8	IS&R	148	("379/88.23").CCLS.	USPAT; JPO; Derwent; IBM TDB	2001/02/14 15:10
9	IS&R	207	("379/93.01").CCLS.	USPAT; JPO; Derwent; IBM TDB	2001/02/14 15:37
10	IS&R	29	("379/100.11").CCLS.	USPAT; JPO; Derwent; IBM TDB	2001/02/14 15:40
11	IS&R	18	("379/900").CCLS.	USPAT; JPO; Derwent; IBM TDB	2001/02/14 15:40

East Search

POSITION	INITIALS	ID NO.	DATE
FEE DETERMINATION	KM	70591	4-4
O.I.P.E. CLASSIFIER			
FORMALITY REVIEW	AF	70556	2-2-00
RESPONSE FORMALITY REVIEW			

INDEX OF CLAIMS

✓	Rejected	N	Non-elected
=	Allowed	I	Interference
—	(Through numeral)... Canceled	A	Appeal
÷	Restricted	O	Objected

Claim Final	Claim Original	Date
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2	2	✓ 11
	3	✓
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If more than 150 claims or 10 actions
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SEARCHED

Class	Sub.	Date	Exmr.
379	88.01 88.11 88.13 88.14 88.17 88.22 88.23 900	9/19/01	DE
379	88.04	9-19-01	DE
704	270	9-19-01	DE
704	275	9-19-01	DE
UPDATE SEARCH		9/19/01	DE

INTERFERENCE SEARCHED

Class	Sub.	Date	Exmr.
379 ↓	88.01 88.13 88.17 88.14	9/20/01 ↓	DE ↓

SEARCH NOTES
(INCLUDING SEARCH STRATEGY)

	Date	Exmr.
East	9-20-01	DE
Talked to Fan Team for Allowance	9-20-01	DE

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